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Insert
The System in 1988

The pictures on pages 8, 12 and 18 were painted by retired employee, Jean Archambault.

Gouvernement du Québec
Office of the Minister of Energy and Resources

Québec City, March 15, 1989

Mr. Pierre Lorrain
President of the National Assembly
Québec City

Dear Sir,

I have the honor of presenting to you the annual report of Hydro-Québec for the year ended December 31, 1988.

Yours respectfully,

John Ciaccia
Minister of Energy and Resources

FIVE-YEAR COMPARISON IN FIGURES

Financial indicators* *(Millions of dollars)*	**1988**	1987	1986	1985	1984
Total assets	**31,762**	31,659	30,588	29,183	27,129
Long-term debt	**20,576**	21,198	20,349	20,123	18,326
Shareholder's equity	**7,850**	7,531	7,023	6,720	6,511
Capital expenditures	**2,033**	1,581	1,470	1,528	1,591
Revenue from sales of electricity	**5,223**	5,040	4,673	4,423	4,101
Net income	**619**	508	303	209	301
Operating statistics					
Installed capacity** *(Megawatts)*	**24,590**	24,533	24,475	23,510	23,480
Sales of electricity *(Billions of kilowatthours)*	**145.4**	152.9	144.1	133.9	123.8
Total number of customer accounts *(Thousands)*	**3,032**	2,947	2,862	2,784	2,697
Number of employees***					
Permanent	**19,252**	18,933	18,470	18,208	18,560
Temporary******	**3,521**	2,989	2,749	3,163	2,186

*These indicators are taken from the consolidated financial statements, which contain the financial statements of Hydro-Québec and its subsidiaries.

**In addition to its own installed capacity, Hydro-Québec has access to most of the generation of the Churchill Falls power plant, which has a nominal capacity of 5,225 megawatts.

***These figures exclude employees on loan to subsidiaries.

****Average based on 26 pay periods.

HYDRO-QUÉBEC IN PROFILE

In April 1944, the Québec government nationalized two major private electricity companies in the Montréal area, thereby creating Hydro-Québec. In May 1963, it brought most of the other private electricity companies in Québec under Hydro-Québec administration.

Hydro-Québec has come a long way since then. It has established a vast integrated electrical generating, transmission and distribution system for the whole of Québec. Its gross generation has soared from 30 to 129 billion kilowatthours a year, while its power system now supplies electricity to 3 million Québec customers, compared to 1.4 million in 1963.

Today, Hydro-Québec is a major exporter of electrical energy to the United States and its assets and installed capacity place it among the largest corporations in Canada. It has, in addition, become a leader in technological research and development.

Hydro-Québec is a joint-stock company whose sole shareholder is the Québec government. Its activities are governed by the Hydro-Québec Act and consist mainly in the generation, transmission and distribution of electricity throughout Québec. It also carries out research and promotion related to electricity, energy transformation and conservation, and allied fields. Hydro-Québec has six wholly-owned subsidiaries and holdings in four companies in the energy sector.

MESSAGE FROM THE CHAIRMAN OF THE BOARD AND CHIEF EXECUTIVE OFFICER AND THE PRESIDENT AND CHIEF OPERATING OFFICER

Hydro-Québec had a good year in 1988. Its financial position improved again, net income at year-end was $619 million and return on equity increased for the third consecutive year.

The sustained vigor of the Québec economy drove firm-electricity sales in Québec higher than the most optimistic expectations. Combined with the continuing low runoff pattern, this substantially narrowed the margin that has existed between supply and demand for several years, and prompted the utility to reschedule the construction of new facilities announced in its development plan.

Overall, Hydro-Québec pursued a policy of prudent growth management in 1988, while further strengthening its financial, technical and administrative position.

Richard Drouin

Claude Boivin

CLARIFIED FIELD OF ACTION

In September, the Québec government published its energy policy for the 1990s. This policy reendorses the importance of electricity to the economic development of Québec, thus giving a new stimulus to Hydro-Québec's own policies.

The Québec government also amended the Hydro-Québec Act, redefining the utility's senior management positions. The Chairman of the Board and Chief Executive Officer now has general control over the company. He is assisted by a team of officers in charge of corporate affairs, and by the President and Chief Operating Officer, who is responsible for power system operation and construction activities, including those in the administrative regions. This dynamic new structure is better balanced and more appropriate for Hydro-Québec's current needs.

In addition, the Government expanded the Board of Directors by appointing the Deputy Minister of Energy and Resources as an ex-officio non-voting member.

IMPROVED BALANCE BETWEEN SUPPLY AND DEMAND

Demand for firm energy in Québec rose more in volume than expected in 1988, to double last year's forecast. Meanwhile, for the fifth year running, precipitation was lower than average and the utility's energy reserves fell appreciably. It was consequently obliged to curtail surplus-energy sales on all its markets.

It also decided to bring forward by one year the construction of the first two generating stations of the La Grande complex Phase II, in order to meet new medium-term needs. In addition, to provide greater flexibility of supply in the short term, especially during power system peaks, it decided to bring the additional capacity at La Grande 2 on stream one year earlier than planned, and made various contractual arrangements with neighboring utilities.

For the future, Hydro-Québec envisages a series of smaller projects, planned so as to allow it to react promptly in the event of fluctuations in demand. It may also continue to regulate demand by means of its marketing programs.

A POWER SYSTEM PUT TO THE TEST

Relatively major technical failures hit Hydro-Québec's power transmission system four times last year. The first was due to harsh icing conditions on Québec's North Shore and affected the entire province. The other three affected one-fifth of the utility's customers. On each occasion, Hydro-Québec restored service swiftly, and successfully analysed, identified and solved the problems.

The distribution system was subjected to greater strain however. Violent storms in the summer caused many service interruptions, while exceptionally strong demand growth in some municipalities led to overloading. Hydro-Québec therefore took various actions and allocated additional budgets for 1989 to raise service quality in these areas. Its objective? To maintain a very high level of service quality and, at the same time, keep a balance between customer expectations, sound financial management and competitive rates.

TWO IMPORTANT ISSUES RESOLVED

In 1988, after several years of negotiations, Canada and the United States signed the Free Trade Agreement. This will alleviate doubts about the expansion of Canadian energy exports to the U.S.A.

Meanwhile, 12 years of legal disagreement between Québec and Newfoundland over the output from Churchill Falls in Labrador came to an end. On June 9, 1988 the Supreme Court of Canada dismissed Newfoundland's final appeal that Churchill Falls (Labrador) Corporation Limited should sell it 800 megawatts of power from the generating station.

FOCUS ON PRODUCTIVITY AND FLEXIBILITY

One of Hydro-Québec's major concerns in 1988 was to use its human resources to best effect. Two new administrative branches were created, one to improve staff development, the other to optimize labor relations. Both will pursue actions launched in 1988 to increase employee efficiency and productivity. One such action, introduced last fall, is the *programme Action-Cadres*, a program of measures designed to strengthen the supervisory manager's participation in corporate management. Another, a new managerial mode for specialists, will be implemented progressively in 1989. Hydro-Québec and the clerical workers' union also concluded an extensive agreement in July which will help employees in new positions adapt to their new functions.

Hydro-Québec also began negotiating with its clerical workers, trades employees, technicians and engineers to renew their collective agreements, which terminated at the end of 1988.

The company's aim in negotiating with the clerical, trades' and technicians' unions is threefold: to narrow margins between the total compensation of its employees and comparison job markets; to temper the application of certain provisions of the collective agreements, especially with respect to working hours, in order to match employee availability to customer and corporate needs; and to clarify criteria for the awarding of subcontracts, which was the subject of disputes during the last two years.

In addition to total compensation, the utility's negotiations with the engineers cover extra conditions of application for their new remuneration scheme, revision of union jurisdiction in light of Hydro-Québec's structure, and improvements to the organization of professional development.

INCREASING EMPHASIS ON THE ENVIRONMENT

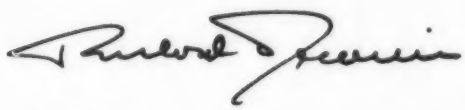
Hydro-Québec is not content with being a recognized leader in environmental protection: it intends to go further. In 1988, this determination took the form of continued emphasis on the environment from the very beginning of studies underlying strategic decisions on future installations. The utility also pressed ahead with promotional activities to ensure that its employees instinctively make concern for the environment part of their everyday activities.

A PROMISING FUTURE

On the strength of its acquisitions and achievements in 1988, Hydro-Québec faces 1989 with confidence. Its priorities remain the quality of customer service, flexible development of its facilities, protection of the environment and consolidation of its financial position. And it has firm faith that staff and outside partners alike will lend their active support to its pursuit of its mission and thereby to the economic expansion of Québec.

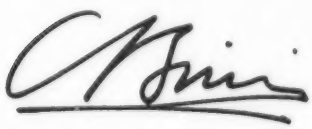
We express our wholehearted thanks to all our staff for their efforts in 1988. Their solidarity, creativity and professionalism are invaluable.

In closing, we offer our sincere thanks to Pierre Leblanc for his work as a member of the Board of Directors. We also welcome François Geoffrion, Georges Laberge and Gérald Tremblay, who joined the Board of Directors, and Michel Blais, André Delisle and Jacques Nadeau, who were appointed senior managers of Hydro-Québec in 1988.



Richard Drouin

Chairman of the Board
and Chief Executive Officer

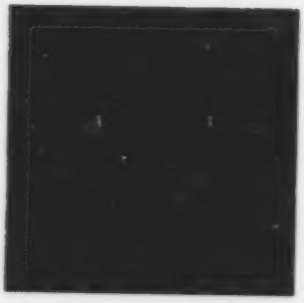


Claude Boivin

President and
Chief Operating Officer

THE MARKETS
CONFIRMED GROWTH

Clean, economical, efficient and inexhaustible energy



In 1988, Hydro-Québec's firm electricity sales in Québec jumped 8.5% to 120 billion kilowatthours, the biggest increase since 1980. This was due to two factors: stronger economic growth in Québec than expected, and the success of the utility's marketing programs.

On the other hand, runoff continued to be lower than average and the energy surpluses that have been available for several years gradually dwindled. Consequently, Hydro-Québec cut back on its sales of surplus electricity to customers inside and outside Québec.

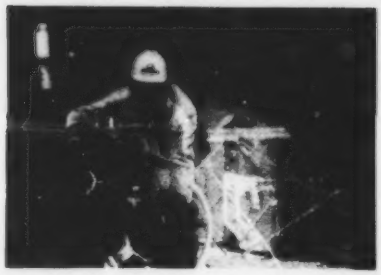
Reevaluation of Québec market trends The current upward thrust in most economic sectors in Québec is proving to be one of the longest in the post-war period. Growth in the manufacturing sector has maintained its steady pace, particularly among bulk power users such as the pulp and paper, smelting and refining, and chemicals industries.

The number of housing starts remained high in 1988 at 58,000: in 95% of cases, despite relatively low oil prices, electricity was chosen over other energy sources. The construction of new commercial buildings, especially in the Montréal area, also boosted electricity sales.

Accent on managing the demand side Since 1982, Hydro-Québec has been offering a wide range of marketing programs to its customers in Québec. They were designed to play a double role.

By offering customers attractive energy choices, the programs stimulated demand. In this way, they helped to absorb the excess generating capacity that was available after the oil shocks of the 1970s and the recession of the early 1980s. At the same time, by targeting specific sectors and times of day, they helped the utility operate its generating facilities as efficiently as possible.

The various dual-energy programs, for example, were introduced to use up energy surpluses. However, because dual energy installations switch to oil during cold weather, they also help Hydro-Québec level out demand on its power system during peak periods.



In 1988, the combined strong increase in demand and low run-off restored the balance between supply and demand. As a consequence, the second aspect of the marketing programs – demand-side management – took on a new importance.

Effects in 1988 Due to the tighter supply situation and the upcoming winter peak, Hydro-Québec bought back a number of surplus-energy contracts signed under its industrial-boiler program. This program, which was set up in 1983 and was due to end in late 1988/early 1989, was designed to encourage industrial users to install electric boilers in addition to existing boilers. Following the retirement of the contracts, most companies returned to their original energy sources; however some have continued to combine electricity with another energy source by joining the dual-energy program.

Although it ended in June, the dual-energy program for industrial and commercial buildings made a strong contribution to 1988 electricity sales in Québec outside peak hours. The overall effect of Hydro-Québec's dual-energy programs was such that an extra 1,350 megawatts of power was available for the 1988-89 winter peak.

With an eye to the future, experiments were conducted with commercial and industrial customers to assess the advantages of the remote-control capability of their dual-energy installations. Work also began with industry on developing a heat pump, principally aimed at the housing market; the heat pump operates mainly on electricity but uses another energy source during peak periods.

Hydro-Québec took advantage of its interruptible power program at various times during 1988 to recover some 600 megawatts of power from companies which had agreed to power supply interruptions at peak periods in exchange for rate reductions.

The electrotechnology implementation program, which was introduced in 1985 and was to end in 1988, is aimed at making Québec companies more competitive by improving the energy efficiency of industrial processes. It was so successful, exceeding its 300-megawatt sales objective by 35%, that Hydro-Québec decided to extend it for three years. Phase II resembles Phase I but is more selective and includes additional financial incentives to small and medium-sized businesses.

Because they offer the powerful combination of sales growth potential and greater flexibility in supply and demand management, Hydro-Québec's marketing programs put it in a good position to meet the challenges of the future.

Improving customer services

During 1988, Hydro-Québec continued to revise its commercial practices and devoted considerable effort to setting up training courses for its customer relations personnel. These courses aim to polish employees' current skills and keep them abreast of the latest technological developments.

The utility also introduced a completely new electricity bill, which offers more information and is much easier to read and understand than the previous one. Significant work was devoted to a new customer complaints procedure, which will shortly be implemented province-wide. In addition, a consultative consumers committee was appointed that provides a forum for two-way discussion between the utility and consumer representatives.

A new system was launched for informing customers about planned power outages, in order to curtail the inconvenience caused. Work was almost completed on a telephone system that will provide customers affected by power failures with up-to-the-minute information on developments.

Microwave heating

Customer services

Lastly, in order to increase its general public visibility and be more accessible to the people of Québec, utility representatives attended over 80 conferences and exhibitions throughout the province. These events allow Hydro-Québec to explain its commercial policy and programs to customers and to sound out their views and expectations.

Continued export development In 1988, Hydro-Québec adapted its short-term sales strategy on external markets to deal with the new supply and demand situation. At the same time, it pursued its long-term strategy by signing a number of significant firm-power and energy sales agreements.

Short-term sales The higher demand and low runoff in 1988 reduced to practically nil the amount of energy surpluses and, therefore, the short-term energy available for export beyond that guaranteed under existing contracts. As a result, the annual volume of surplus electricity sales outside Québec was lower than forecast.

However, because neighboring systems, like Hydro-Québec, experienced higher power demand than expected, surplus-energy sales were reserved for times when buyers' needs were greatest. Buyers were thus able to avoid using expensive peaking facilities. Furthermore, because Hydro-Québec's prices are usually based on what it would cost buyers to produce the energy themselves, the unit price of energy rose.

At the same time, Hydro-Québec purchased energy from neighboring systems at advantageous rates outside peak hours for use in Québec, in order to maintain its own energy reserves or for resale to other systems. It also signed a number of agreements with other utilities to purchase some 800 megawatts of additional power between December 1988 and March 1989 to meet peaking requirements.

Long-term sales In January 1988, Hydro-Québec signed a memorandum of agreement with New York Power Authority (NYPA) worth some $17 billion. The agreement covers a maximum of 1,000 megawatts of power, to be delivered in 500-megawatt blocks, and a corresponding amount of energy estimated at 131 billion kilowatthours. Deliveries of the two blocks will begin in 1995 and 1996 respectively and each continue for 20 years.

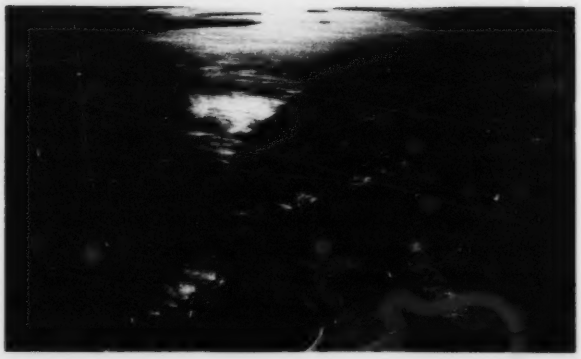
In December, the two companies signed a two-part seasonal-diversity agreement, which is based on the fact that annual peak demand occurs in winter in Québec and in summer in New York. The agreement allows each utility to sell electricity during its low season and purchase at attractive rates during its peak season.

Under the first part of the agreement, Hydro-Québec will sell 800 megawatts of power and three billion kilowatthours of energy to NYPA between April 1 and October 31 each year from 1999 to 2018. These sales are expected to yield revenues of $8.5 billion.

Under the second part of the agreement, Hydro-Québec can buy up to 400 megawatts of power from NYPA annually between 1989 and 2011. This power will be available on demand, between November 1 and March 31, at an estimated total cost of $380 million. This agreement gives Hydro-Québec extra supply flexibility and helps it delay construction of new peak generating facilities.

Plasma heating

Châteauguay substation



La Grande 2

Deliveries under all three agreements with NYPA will be made via the 765-kilovolt line between Châteauguay substation in Québec and Massena substation in New York.

During 1988, Hydro-Québec received National Energy Board approval for Phase II of a contract signed in 1985 with New England Utilities, a group of members of the New England Power Pool. Under the contract, Hydro-Québec will sell 70 billion kilowatthours of energy between September 1, 1990, and August 31, 2000. Deliveries will be made via the DC line connecting Radisson substation near La Grande 2 power station with Des Cantons substation in Québec, then via the interconnection planned to link Des Cantons with Sandy Pond substation in Massachusetts, near Boston.

On July 20, Hydro-Québec ratified a contract with Central Maine Power Company, negotiated last year, under which Central Maine will purchase three 100-megawatt blocks of firm power starting in 1992, 1995 and 2000 respectively, with an option to purchase an extra 300 megawatts. An 1,100-megawatt interconnection will have to be built between Des Cantons substation in Québec and Jay substation in Maine to transmit this electricity. Deliveries will begin as soon as the new line goes into service in 1992 and end in 2020. On January 9, 1989, however, the Public Utilities Commission in Maine rejected the request for contract approval submitted by Central Maine Power Company. This could entitle the latter to terminate the contract.

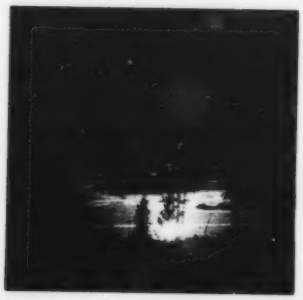
Hydro-Québec also concluded a number of medium-term contracts in 1988, with New Brunswick Power, Vermont Utilities, and Citizens Utilities Company, Vermont.

Two agreements reached in 1987 with New Brunswick Power were ratified in 1988. Under one contract, Hydro-Québec will sell New Brunswick 50 megawatts of power each year until 1990, with the option to renew for three years by mutual agreement. Under the other, the Québec utility will sell a maximum of 17 billion kilowatthours of energy and a maximum of 300 megawatts of power between 1988 and 1994. The amount of power covered by this contract has been increased for the purposes of an agreement between New Brunswick Power and Prince Edward Island.

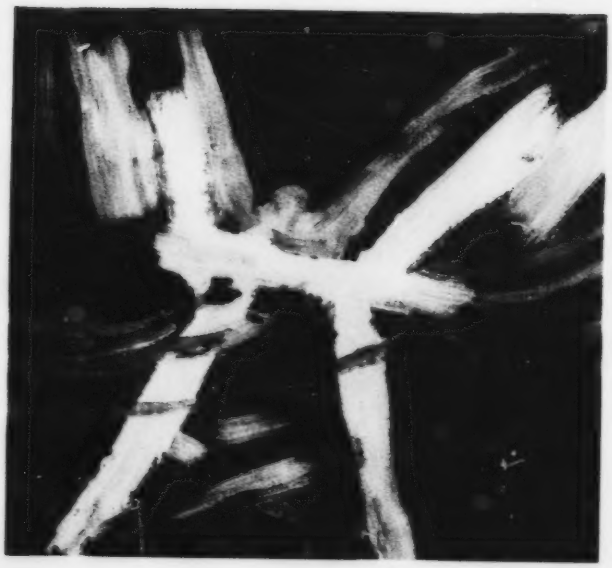
Hydro-Québec also agreed to sell 54 megawatts of power with corresponding energy to Vermont Utilities between January 1989 and October 1991. This electricity will be delivered via the Des Cantons DC interconnection.

Lastly, an agreement reached in March 1986 with Citizens Utilities Company, due to end in December 1988, was extended until March 1990. It covers the sale of up to 40 megawatts of power.

POWER SYSTEM DEVELOPMENT
THE OPERATOR'S CHALLENGE



A constant technical and environmental challenge



Between 1984 and 1988, Hydro-Québec made major investments in upgrading its power system and in installing or reinforcing its interconnections with neighboring systems. At the same time, it undertook a fundamental review of the design criteria of its installations in order to meet the needs of a growing customer base.

In 1988, the utility oriented its activities along the same lines. Its main objectives were to strengthen the transmission and underground distribution systems and to develop generating facilities.

Upgrading transmission system reliability Hydro-Québec's transmission system was designed in the early 1960s. Over the years, as major transmission lines were added, the system became technically more complex. It also had to be equipped with a growing number of protection devices in order to deal with the size of the load and the great distances from new power stations to consumption centres.

In addition, in order to allow electricity exchanges and provide extra supply security, Hydro-Québec increased the number of interconnections with neighboring systems.

In view of these considerations, Hydro-Québec decided in 1987 to examine and overhaul the design and reliability criteria of its transmission system, so as to identify and eliminate vulnerable areas. It chose to adopt criteria compatible with those of the Northeast Power Coordinating Council, a body which coordinates energy exchanges between electrical utilities in eastern Canada and the northeastern United States. The aim is to limit province-wide power failures to not more than one every ten years.

Three aspects of this major long-term project were realized in 1988. First, the reliability of the principal components of the transmission system was thoroughly evaluated. Second, design criteria for the existing system were reexamined and, third, recommendations for corrective action were formulated. The latter two projects are continuing in 1989.

In 1988, Hydro-Québec adopted a technology that has long-term implications for power-system reliability. It installed series capacitors on four 315-kilovolt transmission lines between Lévis and Rivière-du-Loup, thus considerably increasing the capacity of the Gaspé transmission system.

Due to the success of this project, the utility is planning to install series capacitors on all its 735-kilovolt transmission lines, at a cost of $800 million. This equipment, which makes power lines behave electrically as though they were much shorter than they actually are, will help to raise the current-carrying capacity of the transmission system and improve its performance.

Related research Throughout the year, a substantial effort was devoted to research on reliability. In one project, Hydro-Québec's power-system simulator was used to model the operation of the transmission system. This research will continue in 1989 on a new power-system simulator. This $10-million centre, whose construction was almost finished at the end of December, will be progressively brought into service during 1989.

Design of underground distribution system under revision Hydro-Québec began a new phase in the strengthening of its underground distribution system in 1988. After investing several hundred million dollars in replacing or repairing various types of distribution equipment over recent years, it launched a thorough review of the design criteria used for its underground system, 80% of which is in downtown Montréal.

The review was necessary for various reasons. Operating problems had begun to occur as a result of the inability of equipment installed over the years to meet current operating standards. Performance and maintenance problems compounded by the unexpected demand growth over the past two years, especially in vigorous construction centres, called for solutions. In addition, the review gave the utility an opportunity to adapt its equipment to new legislation on safety in the workplace.

A study group set up in 1988 will spend 15 months studying the design characteristics of the system and developing a plan to upgrade it.

Optimizing generation Hydro-Québec is continually improving the technical efficiency and productivity of its generating equipment. A number of efforts were made in 1988 in line with this pursuit.

New maintenance methods After undergoing trials at Rapide-Blanc generating station, a new permanent monitoring system known as SUPER (*SUrveillance PERmanente*) was accepted. A similar system will be installed at Manic 5.

By monitoring a large number of mechanical and electrical variables, SUPER provides continuous information on equipment status. Regular inspections by human beings will be less frequent and maintenance will be easier to plan, taking place as and when necessary. Interventions will therefore be less costly and more efficient.

Hydro-Québec's research on a compact robot for repairing turbine runners damaged by cavitation made significant strides in 1988. Under a joint project with Ontario Hydro and the Canadian Electrical Association, the utility conducted successful field tests on a prototype at an Ontario Hydro power station. The prototype performs welding operations formerly done by hand under damp uncomfortable conditions that can affect productivity.

Managing energy reserves Because Hydro-Québec's power system is 95% hydroelectric, effective management of water resources is an important aspect of its operations, particularly during periods when those resources are scarce.

During the five years between 1983 and 1987, runoff was 10% lower than average. In 1988, this low runoff pattern was repeated. This factor meant that energy reserves in the reservoirs dropped by 17.6 billion kilowatthours between November 1987 and November 1988. The utility's safety margin was therefore slightly reduced.

Hydro-Québec has various ways of dealing with such fluctuations. In 1988, these included the reduction of surplus-electricity sales, especially outside Québec. In order to optimize its reservoir management methods, it also began to revise its energy reliability criteria and developed new mathematical models for generation planning.

Imports via Châteauguay interconnection In 1985, Hydro-Québec commissioned a DC converter station at Châteauguay which connects the Québec power system with that of New York. Until 1987, however, this substation had only been used to export electricity.

In a joint venture with New York Power Authority, Hydro-Québec successfully imported 1,000 megawatts of power via its new converter in 1988. This import capacity gives Hydro-Québec extra supply security during tight operating periods.

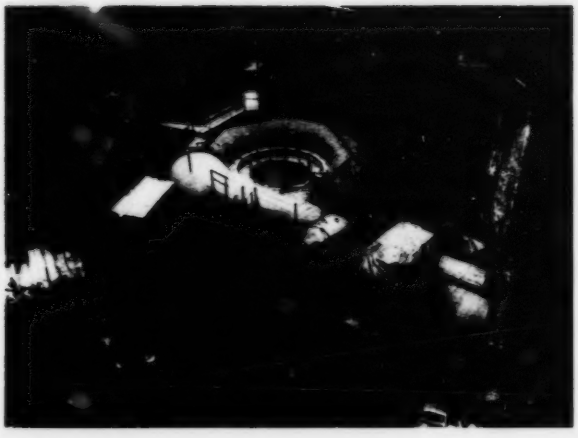
Power system expansion Hydro-Québec has three major construction projects underway: the addition of extra capacity at Manic 5 and at La Grande 2, and construction of the eleventh high-voltage transmission line. These projects were expected to allow the utility to meet demand until the mid-1990s. In June 1988, however, with demand increasing faster than anticipated, Hydro-Québec decided to bring forward the commissioning of the additional capacity at La Grande 2 by one year. The new turbines will now come on stream in 1991 and 1992.

During 1988, $121 million was spent on the project. Work on the access gallery and the two tailrace tunnels was finished. Contracts were awarded for the intake and penstocks, and most of the overburden and open-face rock was excavated. At year-end, the engineering work was more than 75% complete.

La Grande 2 substation

Manic 5, Additional Capacity

At Manic 5, work progressed as planned and the generating station will come into service in 1989. Concreting of the power station was almost completely finished, while installation of the major turbine-generator components continued. The headrace and tailrace were excavated, and the rock plug was removed. Some $155 million was invested in this project during 1988.



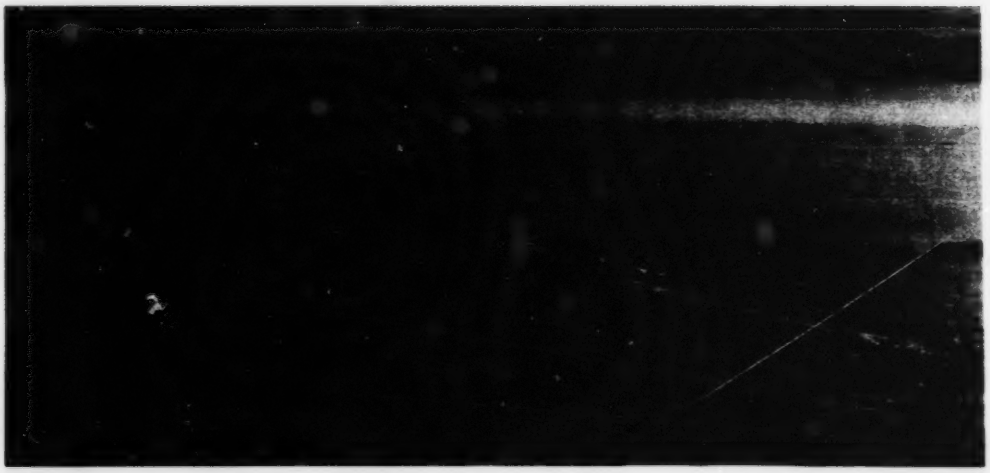
Manic 5, Additional Capacity

Work progressed on the Radisson-Nicolet-Des Cantons transmission line, which will carry electricity to New England, and on installation of the 2,250-megawatt Radisson converter station. Civil engineering of the conventional substation continued, while the electrical engineering work began. The foundations at Nicolet substation were completed. At Des Cantons, an access road was built in readiness for the alterations to this substation planned for spring 1989.

Construction of the transmission line itself proceeded as expected: two sections are now finished and four others were started. The temporary overhead line across the St. Lawrence went into construction, while the engineering work for the permanent under-river tunnel was completed, all in conformity with environmental standards.

This under-river line will be the first in the world to use ± 450-kilovolt DC cables. The technical design criteria for these cables have been established, and contracts awarded for manufacturing the prototypes. The cables will be tested in a newly built $13-million facility but the utility has already conducted a considerable number of related technical tests, for example, on smoothing reactors and transformers for HVDC transmission lines.

Meanwhile, the utility prepared a vast environmental follow-up program that will allow it to evaluate the effectiveness of the mitigation measures proposed in earlier impact studies. It also began to develop environmental enhancement programs for this project. A budget of almost $8 million will be spent on implementing recommendations made by the 63 admissible organizations, that is, regional-county municipalities, municipalities and native communities.



Grondines-Lotbinière river crossing

Future projects Until 1988, Hydro-Québec expected that the generating stations in place or under construction would meet demand until 1995. However, the strong sales growth in 1988 and the expectation of its continuance into 1989 persuaded the utility to bring forward two commissioning dates for Phase II of the La Grande complex by one year. La Grande 1 and Brisay generating stations will therefore be commissioned in 1994-5 and 1995 respectively.

Engineering work on these generating stations commenced and management teams were set up. In addition, requests were made to the Québec government, in particular the *ministère de l'Environnement*, for work authorizations.

Studies began in 1988 to identify corridors for Hydro-Québec's twelfth and thirteenth transmission lines, which will be needed in the mid-1990s to transmit electricity south from the new power stations at La Grande, Phase II and on the North Shore. Consultations with the public will begin in 1989, but in 1988 the utility met with representatives of the Québec government, the *Union des municipalités du Québec* and the *Union des municipalités régionales de comtés du Québec* to discuss its long-term power system development plans.

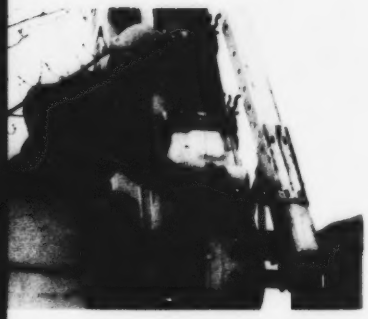
Finally, the utility completed the first phase of draft-design studies for a new 800-megawatt power station planned to go into operation in 1998 on the Sainte-Marguerite river on Québec's North Shore. In light of technical, economic and environmental analyses and of concerns expressed by local communities, the central corridor was chosen for the access road to the generating station.

As this project will necessitate the diversion of the aux Pékans and Carheil rivers, the environmental effects of the diversion on the salmon population in the Moisie river were studied intensively. A committee of scientists was set up to advise Hydro-Québec on the quality of the studies that will be used to determine the mitigation measures.

La Grande 2 reservoir

RESOURCE MANAGEMENT
FROM CONSOLIDATION TO RENEWAL

In 1988, Hydro-Québec entered a new stage in its resource management, in which a fresh vision of the future roles of members of the organization is emerging. The watchwords? Flexibility and productivity.



Greater dialogue This year, as usual, the utility carried out negotiations with its various groups of unionized and nonunionized employees. Discussions with trades employees on the subject of subcontracting stood out in particular. The main point of dispute was the division of work between in-house and external personnel with respect to the replacement of existing equipment. This activity can be considered to be construction work or maintenance work: the former is generally executed by external personnel, whereas operating and maintenance activities are undertaken in-house. However, there were serious differences in interpretation of the subcontracting clauses of labor agreements on the job site. The union and management came to an agreement for the year, but without relinquishing their respective positions.

With respect to health and safety, negotiations between Hydro-Québec and committees representing its trades employees' and technicians' unions centred on the first part of a new work code adopted by management last February, the *Code de sécurité des travaux hors énergie* (safety regulations for work on grounded lines). Agreement was reached, and discussions on the safety aspect of live-line work will resume in 1989.

A new scheme for unpaid leaves of absence came into force during 1988, for which most employees are eligible. From now on, employees can regularly set aside a portion of their salaries in order to build up income for leaves of six months to two years.

Hydro-Québec also evaluated its position in relation to the comparison job market by conducting a study of the remuneration of unionized jobs in similar companies. This study will be the basis for negotiations on the utility's collective agreements, most of which terminated at year-end.

Perpetually striving for greater efficiency

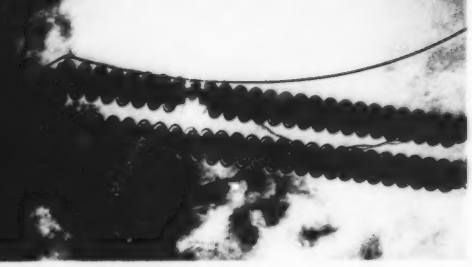
Professional development Decisive steps were taken in the area of professional development in 1988. In July, the utility agreed with the clerical workers' union that employees in new office positions will not only be trained specifically for that position but will also receive preparatory training for more technical jobs.

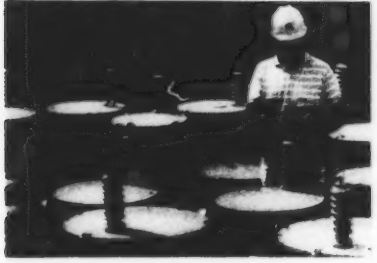
Hydro-Québec also adopted measures designed to help its managers become more effective. These included a successful performance evaluation program for managers, which was later adapted for specialists, a program initiated in the summer for assessing the potential of senior executives, and consultation with first- and second-level managers. The latter activity resulted in *programme Action-Cadres*, diverse measures designed to strengthen the supervisory manager's participation in corporate management. In addition, an agreement was signed with the *Association professionnelle des cadres de premier niveau* that will match the working conditions of first-level managers to those of the market.

Equality of opportunity continued to be a topic of discussion this year. Nonunionized clerical employees and executive secretaries are now entitled to retraining in computer operation and professional development to prepare them for specialists' positions. Two pilot day-care centres went into operation, one at head office, the other in the Des Seigneuries sector on the outskirts of Montréal. In addition, the utility conducted its first ever survey of the ethnic origins of permanent and temporary employees.

In order to widen their career opportunities, women employees can now take up to two days of paid leave per week to follow professional development courses. In addition, to make management jobs more attractive to women and prepare them for positions traditionally held by men, the utility ran information and discussion workshops on the role of the manager.

Protecting non-smokers As a public organization, Hydro-Québec is subject to the Act Respecting the Protection of Non-Smokers in Public Places. It therefore continued to gradually increase the number of places where smoking is banned.





Revision of management practices Hydro-Québec has many efficient management tools and mechanisms: a development plan, a budget system, a hierarchial approval system and an internal-audit unit. The *Plan de redressement, horizon 1988-1990* (Recovery Plan, Horizon 1988-1990) developed by *Finances* and *Administration* during 1988 goes a step further, suggesting a number of specific measures.

One is to increase accountability by introducing management by objectives and criteria for assessment and follow-up, in the regions as well as at head office. Another is to strengthen internal and management controls, mainly by revising the policies, directives, methods and standards used in finance and administration.

Much work remains to be done before all Hydro-Québec's objectives are realized. Nonetheless, the utility is now in a position to make significant productivity gains in the annual volume of transactions such as billing, collection, purchasing and payment. Tighter financial management could yield appreciable savings in areas ranging from debt recovery, procurement planning, acquisition and stock management to the diversification of its investment portfolio and the financing of its subsidiaries.

An interesting measure recently adopted by the Board to ensure smooth running of the utility is a code of ethics for all Hydro-Québec employees. It contains rules of behavior that reflect the utility's values and will help it fulfil its mission as a public-service corporation. Each employee has received a personal copy of the code.

Company-wide computerization Another important aspect of resource management in 1988 was a broad analysis of the management of computer activities throughout the utility. Work concentrated on the preparation of a computer development plan. The objective was immediately to resolve certain weaknesses in the way data processing is managed and organized, and thus to increase the involvement of managers in computer management and ensure that the utility's business needs are better met.

In the current context of decentralization, computers have become indispensable at Hydro-Québec no longer the monopoly of data processing specialists, they are found everywhere. Senior officers, middle managers, and users at all levels are becoming increasingly aware of this move towards computerization, in particular of precisely how roles and responsibilities are shared, and of the issues of security and ethics.

Significant strides have been made towards enhancing computer performance. Hardware has been standardized, an essential step for cost control and efficiency. The computer centre is constantly being rationalized and updated to ensure it plays a truly corporate role, and microcomputers have been installed company-wide.

Lastly, in order to adapt the utility's computer activities to its new needs, both hardware and software have been made easier to use and brought more into line with management needs. For example, a recently introduced CA/eMAIL electronic mail system, known as MEMO at Hydro-Québec, is now serving over 2,500 users and has simplified daily operations throughout the company.

Research on electric and magnetic fields

HYDRO-QUÉBEC IN ITS ENVIRONMENT
AN OVERT COMMITMENT

Hydro-Québec is aware that, in addition to being a public utility, it is a corporate citizen in the outside world. In protecting the environment – conducting technological R & D – exporting know-how – purchasing goods and services – informing the public or promoting social or cultural activities – it is not just present, but actively committed to its responsibilities to the community.

Protecting human health and the environment Because Hydro-Québec is resolved to protect and develop the environment, it has made the environment as important an aspect of its projects as are the economic and technical considerations. Its major objectives are: to consider the environment in its strategic decisions; to include environmental concerns in its operating and maintenance activities; to improve its methods for analysing and evaluating impacts, and to pursue environmentally oriented scientific research.

Human health concerns dominated 1988, the effects of PCBs (polyphenyl bichlorides) in particular. In order to better fulfil its commitments in this area, the utility overhauled a plan it had adopted in 1985 to eliminate PCBs from its system. Early in the year, it carried out a successful pilot experiment by sending 45 tonnes of PCBs and contaminated equipment to the U.K. for destruction by RECHEM Environmental Services. Late in the summer, Hydro-Québec experts were called in to provide assistance after a fire in a warehouse containing PCB-contaminated waste at Saint-Basile-le-Grand near Montréal. As a result of the fire, the Québec government amended its legislation on hazardous waste and Hydro-Québec upgraded its storage methods. Although the utility possesses 20% of Québec's 5,000 tonnes of PCBs, it intends to eliminate these products from its power system as soon as possible.

In order to better evaluate the potential health hazards of electricity, Hydro-Québec introduced an action plan on the biological effects of the electric and magnetic fields that exist near all electrical installations. As part of this plan, a joint epidemiological study will be conducted with Ontario Hydro and *Électricité de France*, based on 150,000 medical records of the three utilities' employees. Data will be recorded by dosimeters worn for a time by several hundred of these employees. This device was designed by Hydro-Québec and is now marketed by *Positron Industrie Inc.*

In addition, the utility signed a contract with the *Institut du cancer de Montréal* to conduct in vitro tests on the interaction between the magnetic field and living cells. Again, Hydro-Québec designed, built and commissioned the exposure chambers for these tests.

Environmental follow-up activities continued to focus on health impacts. For example, as a result of a 1986-87 investigation into fish mercury levels, a new guide to fish consumption was prepared for the Cree fishing community by the Cree Board of Health and Social Services of James Bay, the Cree Regional Authority and Hydro-Québec. The guide shows which fish species offer the least risk and where they can be caught. Some 3,000 fish samples

were taken during the year in the western sector of the La Grande complex for analysis. Sampling will continue over coming years to allow environmentalists to track developments.

Hydro-Québec also contributed to the work of the James Bay Mercury Committee, which is developing ways of allowing the Cree to preserve their way of life free of health hazards.

Intensified dialogue with local communities Hydro-Québec's commitment to the quality of life goes hand in hand with dialogue with local communities. It therefore maintains close contact with farmers and native peoples, the primary users of environmental resources.

For example, in 1988 Hydro-Québec negotiated an agreement with the Attikamek nation to minimize the impact of the construction of the Radisson-Nicolet-Des Cantons transmission line on their traditional activities. This agreement also allows for the possibility of compensation and for permanent consultation on any project likely to affect this nation.

The input of native people is now sought at the preliminary stages of every project, in order to ensure the quality of studies as early as possible. Thus, in 1988, Hydro-Québec, the *Conseil-Attikamek-Montagnais* and the *Secrétariat aux affaires autochtones du Québec* set up a consultation mechanism for the Sainte-Marguerite river development project.

Meanwhile, Hydro-Québec completed negotiations with the Inuit of Nunavik and Kuujjuaq respecting the diversion of the Caniapiscau river. The Inuit themselves will choose and carry out measures to reduce adverse environmental effects as provided in the Kuujjuaq Agreement (1988) and Supplementary Agreement Number 9.

Hydro-Québec maintains ongoing dialogue with the farming community. This year, discussions took place before the standing consultative committee of the *Union des producteurs agricoles du Québec*, mainly about compensation for power system equipment installed in forests. As a result, the June 1986 agreement that provides for compensation in farming and lumbering regions was amended in December.

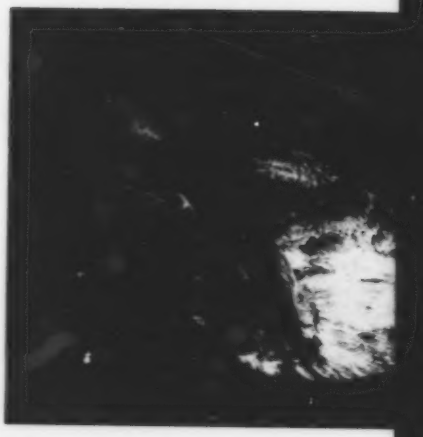
Hydro-Québec continues to monitor the social impacts of its projects closely. In 1988, the utility improved its evaluation methods and conducted a first bibliographical study of the social impacts of the La Grande complex. It also assessed the social impacts of building and operating the Manic-Outardes complex, and pursued studies on the visual impact of transmission lines.

Matching technology to needs Hydro-Québec's technological choices allow it not only to meet its corporate objectives but also to market its technology in cooperation with outside agencies and industrial partners, and promote technological development. In 1988, it carried out joint research projects along these lines and marketed a number of technological innovations.

In order to consolidate and develop its markets, Hydro-Québec makes its technology available to industry. This year, its research and testing laboratories continued to play a leading role in the electrical industry, especially for manufacturers such as ABB. For example, 25% of the activities of the utility's high-power laboratory and 52% of those of its high-voltage laboratory were undertaken for external clients. Its electrochemistry and electrotechnology labora-

Agreement between Hydro-Québec and the Attikameks

Electricity and the pulp and paper industry



Electricity and aluminum

tories (LTEE) also helped to make industry more competitive, doing work for clients in sectors ranging from pulp and paper to acoustic tiles, electrochemistry and aluminum.

It carried out joint research and development projects with many industrial companies in 1988. Service contracts worth $2.5 million were given to *Technologies MPB Inc.* and Canatom Inc. for work on the experimental tokamak. Similarly, contracts totalling almost $1 million were signed with *Cegelec Industrie Inc.* and Joslyn Canada Inc. who will validate prototype low-temperature circuit breakers and failsafe surge arresters.

One of the utility's technology-related objectives is to focus its research and development effort on areas having potential spin-offs. Hence the importance given to nuclear fusion in shared research activities. In 1988, Canada was invited to become a partner in the International Thermonuclear Experimental Reactor project, in recognition of the work accomplished at the Canadian Centre for Magnetic Fusion. This centre was created this year by Hydro-Québec and two partners, Atomic Energy of Canada Limited and the *Institut national de la recherche scientifique*. The utility also took steps to establish similar programs in robotics and superconductivity, again in collaboration with industry and universities.

Hydro-Québec is devoting an increasing proportion of its resources to developing and marketing new technologies. The marketing is mainly carried out by the subsidiaries of Nouveler Inc., which have a turnover of over $52 million and have created some 750 directly related jobs. A new subsidiary, Strateck Technologies International, has been formed to market administrative software. Hydro-Québec also licensed some 20 companies to exploit technology for which it holds the patents, generating additional turnover of $10 million for these companies. Moreover, it has just set up a $15-25 million risk capital fund to be used for high-technology ventures in the energy sector.

Finally, Hydro-Québec continued to work with the universities to ensure that enough trained scientists will be available for the future. It awarded research grants, trained university students, and gave subsidies for university laboratories and for two research chairs, one at McGill University, the other at *École Polytechnique de Montréal*. It also awarded several professional-service contracts to Québec universities, mainly for the Canadian Centre for Magnetic Fusion and for hydrogen storage studies.

In all, $125 million was spent on research and development in 1988, or 2.4% of the utility's total revenue. Hydro-Québec invested 90% of that sum: the rest consisted of either grants from government and institutions or revenue from service contracts and joint projects.

HydrogenAL

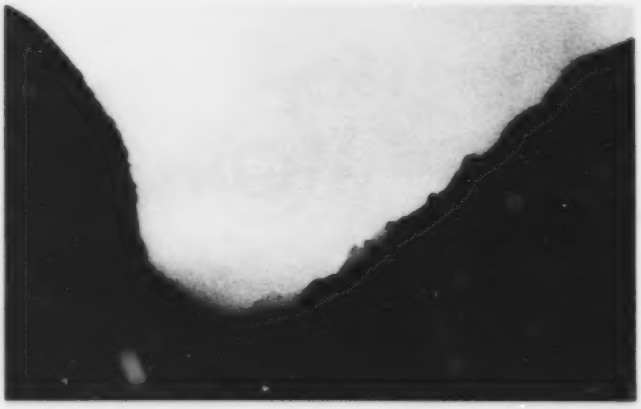
Exporting know-how In 1988, Hydro-Québec International celebrated its tenth anniversary – a suitable moment to take stock of the development of this fledgling organization, which exports Québec expertise in the generation, transmission and distribution of electricity. As Hydro-Québec's international arm, Hydro-Québec International has always indirectly stimulated the provincial economy. It has a twofold mandate: to help Québec consulting engineers, builders and manufacturers penetrate foreign markets, and to export the utility's expertise. Its objectives have therefore been to collaborate with the private sector, while selling Hydro-Québec's products on available markets. Now that this effort is well underway, the organization's task is to maximize the economic benefits for Québec businesses.

To that end, it has chosen to focus its efforts on power system management, operation and training, leaving its partners to operate in their own fields at home or abroad. Projects are being carried out in some 30 countries, mainly in Africa. For example, the company is developing an expansion plan and training staff for the national power system of Madagascar. It has also set up a training program for the engineers and technicians of the electricity company of Zaire. In Guinea, Cameroun and Senegal, Hydro-Québec teams continued to provide technical assistance in major fields of power system operation to nationally-owned utilities in those countries. In addition, it carried out feasibility studies for hydroelectric generating stations in Algeria and Cameroun, for transmission line engineering in Mali, and for rural electrification projects in Morocco.

Hydro-Québec International also pursued its activities in Asia. In particular, a project management team is participating in the development of a system control centre for the Bangladesh Power Development Board.

In the wake of the 1987 Francophone Summit in Québec City, Hydro-Québec gave its subsidiary responsibility for a program of cooperation and training in managing and operating power utilities. Hydro-Québec International has already organized events for a dozen African countries under this program, which is designed to make Hydro-Québec's technology and administrative expertise available to French-speaking countries. For example, a seminar it organized in Abidjan in the Ivory Coast on electricity and the environment in Africa was attended by 25 French-speaking African countries. Another seminar on high-voltage power transmission was given first in Morocco then in Tunisia. Hydro-Québec also developed training programs for nationally-owned electricity companies in Togo and Senegal.

Pakistan



China

Distribution transformers

Maximizing economic spinoffs for Québec Hydro-Québec purchases injected $1.4 billion into the Québec economy in 1988. As 78% of these goods and services were bought in Québec, $1.1 billion in economic spinoffs resulted.

Purchases of strategic electrical equipment and apparatus for the power system amounted to $420 million. The Québec content of these goods was 66%, yielding $277 million in economic spinoffs.

The utility made special attempts to foster industrial development, particularly via manufacturing agreements with Québec-based companies that support local manufacture, quality of employment, exports, research and development. The goods and services it purchased in 1988 created 22,000 person-years of work for suppliers.

Overall, Hydro-Québec's activities generated almost 55,000 person-years of work in 1988, either directly or indirectly.

Social and cultural commitment Hydro-Québec is deepening its commitment to society and to participating in the cultural life of Québec. In 1988, it had three main aims: to improve communications with the public and its employees, to be a moving force in society, and to encourage a better general understanding of its operations. It took a proactive approach to topics of public interest. For example, the 1988 Hydro-Québec lecture series, organized in cooperation with *Université du Québec à Montréal*, covered health and environmental topics such as acid rain, PCBs, mercury, and electric and magnetic fields. Hydro-Québec's *1988-1990 Development Plan, Horizon 1997*, together with other documents describing the utility's future activities and plans for its power system were widely distributed to the public.

As a government-owned utility, Hydro-Québec has a civic responsibility towards the public. In order to reach as many people as possible, and since awareness-building begins at school, it offers safety information sessions for young people. In the 1987-88 academic year alone, over 80,000 primary school children throughout Québec learned about electricity and its hazards from this "Safety Along the Line" program.

The utility sponsored a number of exhibitions and events for the general public, including Science Week, during which it opened several facilities to the public, the *Québec électrique* exhibition at the *Musée de la civilisation* in Québec City, and the Education, Science and Technology Show in Montréal. It also took part in MILSET (International Movement for Leisure Activities in Science and Technology), which was created after the first International Expo-Science meeting held in Québec City last year. This association with MILSET is an investment in the future that should encourage young people to choose scientific careers.

Hydro-Québec is one of the leading sponsors of an industrial interpretation centre in Shawinigan designed to increase public familiarity with and provide a platform for industry. In addition, the utility has just inaugurated an archive centre that constitutes a unique record of the utility's history since its creation.

Finally, as in the past, Hydro-Québec and its employees supported a wide range of cultural and humanitarian causes. These included the Centraide (United Way) fund-raising campaign to which active and retired employees gave over $970,000, the largest public-sector donation in Québec.

Musée de la civilisation in Québec City

Hydro-Québec's net income for 1988 was $619 million, an increase of $111 million or 21.5% over 1987 when net income was $508 million. Consequently, return on equity was up for the third consecutive year, to reach 8.0%, compared with 7.0% in 1987.

Sustained economic growth was a major factor in the revenue increase of $467 million, or 11.2%, from Québec sales of firm electricity.

However, the reduction in available energy surpluses led to a significant decrease in revenue of $284 million or 33.1% from export sales and Québec sales of surplus electricity.

Total expenditure rose by $243 million. But the marked decrease of $143 million in interest and exchange loss, in large part due to the strengthening of the Canadian dollar, contributed to the improved financial results for 1988.

QUÉBEC SALES

The total volume of electricity sales in Québec was 128.5 billion kilowatthours in 1988, up 3.5% from 1987's total of 124.1 billion. The largest increase, 8.5%, was in firm-electricity sales, whereas surplus-electricity sales were down by 5.0 billion kilowatthours or 36.5% from 1987.

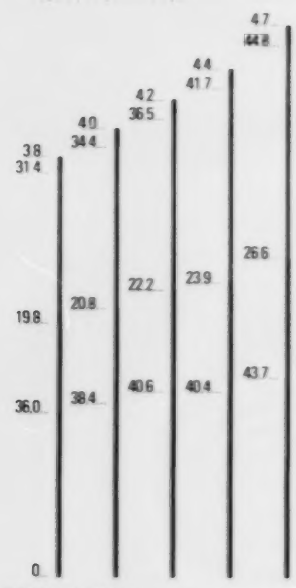
Revenue from total electricity sales in Québec was $4,752 million, 9.8% more than in 1987.

The increased volume of firm-electricity sales brought in additional revenue of $236 million, while the rate increases in May 1987 and May 1988 accounted for $186 million in additional revenue. Surplus-electricity sales fell considerably in 1988, but the average price obtained per kilowatthour limited the decrease in revenue from these sales to 29.0%.

Sales of firm electricity in Québec

(Billions of kilowatthours)

1984	1985	1986	1987	1988
91.0	97.6	103.5	110.4	119.8



- Residential and farm
- General and institutional
- Industrial
- Other (municipal-distribution systems, neighboring Québec systems, etc.)

Revenue from firm-electricity sales in Québec

(Millions of dollars)

1984	1985	1986	1987	1988
3,290	3,541	3,857	4,183	4,650

- Residential and farm
- General and institutional
- Industrial
- Other (municipal-distribution systems, neighboring Québec systems, etc.)

Residential and farm sector:
+8.1% Sales in this sector reached 43.7 billion kilowatthours, 3.3 billion more than in 1987. A vigorous economic climate stimulated new construction; there were 58,000 new housing starts in Québec in 1988. Approximately 95% of these new homes have electric heating. The strength of the economy was also a factor in the conversion of a large number of oil and gas heating systems to electricity and in a higher unit consumption of electricity in Québec households. These three elements, along with increased consumption resulting from new construction in 1987, represent a 1.8-billion-kilowatthour rise in sales in 1988. In addition, more extreme temperatures than in 1987 led to a further 1-billion-kilowatthour increase in sales.
Revenue from the residential and farm sector rose by 11.1% or $197 million, of which $79 million can be attributed to the 1987 and 1988 May rate increases.

General and institutional sector:
+11.0% General and institutional sales in 1988 totalled 26.6 billion kilowatthours, an increase of 2.7 billion or 11.0% over 1987, the highest rate of growth of any sector. This exceptional increase was due mainly to the success of the dual-energy programs and to the large amount of new commercial construction which resulted in additional sales of 1.0 and 1.3 billion kilowatthours respectively.
Revenue from sales in this sector reached $1,282 million, up 13.8% over 1987. The May 1987 and May 1988 rate increases accounted for $48 million of this revenue growth.

Industrial sector: +7.5% Growth in industrial sales in 1988 was sustained by the strong performance of many industries, notably pulp and paper, chemicals and metal mining, and by greater utilization of technologies requiring large amounts of electricity. Moreover, the success of the electrotechnology implementation and dual-energy heating programs resulted in additional sales of 0.5 billion kilowatthours, out of a total increase of 3.1 billion kilowatthours in this sector.
Revenue totalled $1,205 million, an increase of 8.9% or $99 million over 1987, of which $50 million is attributable to the 1987 and 1988 rate increases.

Surplus-electricity sales:
−36.5% Due to the reduced availability of energy surpluses in 1988, Hydro-Québec retired most surplus-electricity contracts. Québec sales of surplus electricity were therefore down considerably, to 8.7 billion kilowatthours from 13.7 billion in 1987.
Revenue from these sales fell 29.0% or $42 million. This decrease was less pronounced than the decline in sales volume however, as higher oil prices early in 1988 enabled Hydro-Québec to raise surplus-electricity prices.

EXPORT SALES

The combination of low runoff and accelerated growth in firm-electricity demand in Québec caused Hydro-Québec, in the fall of 1988, to interrupt export surplus-electricity sales other than those guaranteed by contract.

Surplus-electricity sales therefore dropped, from 20.5 billion kilowatthours in 1987 to 7.7 billion in 1988. On the other hand, firm-electricity sales rose, from 8.3 billion kilowatthours in 1987 to 9.2 billion in 1988.

Total export sales amounted to 16.9 billion kilowatthours, compared with 28.8 billion in 1987, a decrease of 41.3%.

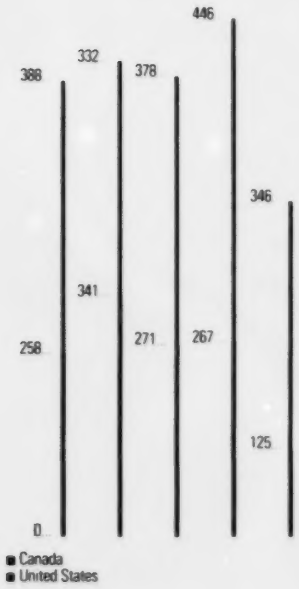
Exports to neighboring Canadian power systems declined from 12.4 billion kilowatthours in 1987 to 5.0 billion in 1988, while exports to neighboring U.S. systems also fell from 16.4 billion kilowatthours in 1987 to 11.9 billion in 1988.

Revenue from sales outside Québec was $471 million, down 33.9% from 1987. However, reduced quantities of available energy and strong market demand enabled Hydro-Québec to sell surplus energy selectively, and to raise the unit price for surplus-electricity exports from $22.36 per thousand kilowatthours in 1987 to $25.23 in 1988, thus partially offsetting the decline in volume.

Revenue from export sales

(Millions of dollars)

1984	1985	1986	1987	1988
646	673	649	713	471



Total electricity sales

(Billions of kilowatthours)

1984	1985	1986	1987	1988
123.8	133.9	144.1	152.9	145.4

TOTAL EXPENDITURE INCREASES 11.4%

Total expenditure was $2,388 million compared with $2,145 million in 1987. Higher operating expenses – $1,419 million, or a rise of $173 million – were the main reason for this increase in expenditure. After inflation of approximately 4% in 1988, the real rate of growth in operating expenses was 9%.

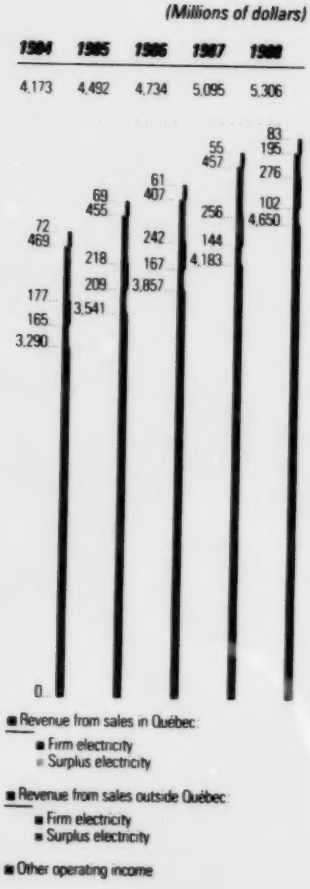
This was primarily due to the following factors: compensation for the retirement of surplus-electricity contracts in Québec; the resources required to operate installations which will be commissioned in the next few years, notably the Radisson-Nicolet-Des Cantons transmission line and related substations; the additional costs of maintenance repairs to the distribution system resulting from the climatic conditions of 1988 as well as costs associated with improved quality of service; additional expenses associated with increased Québec sales of firm electricity and improved customer service; increased research and development activities; and increased amortization of grants under sales programs.

Electricity purchased in 1988 was up by 23.4% or $26 million, primarily due to additional purchases from neighboring power systems needed to meet the major increases in peak demand.

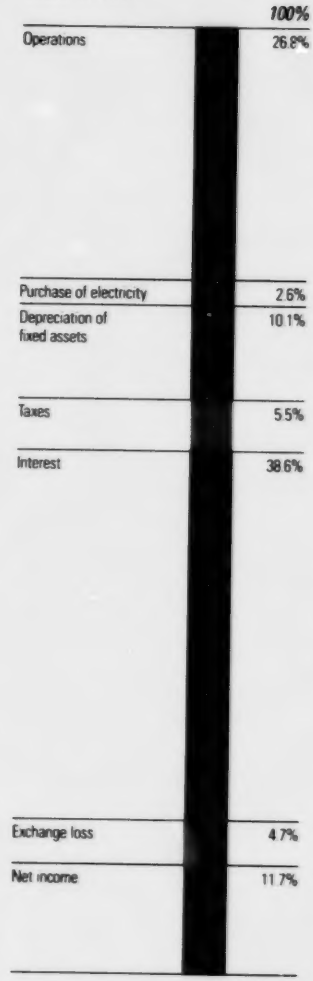
Depreciation of fixed assets totalled $538 million, an increase of 7.7%. The commissioning of new distribution equipment was a contributory factor here.

Taxes reached $295 million, up 1.7%, due to an increase in taxable gross revenue, used to determine the tax applied as real estate tax to some Hydro-Québec facilities.

Gross revenue



Allocation of revenue dollar in 1988



INTEREST EXPENSE DECREASES 5.5%

Interest expense decreased by $120 million in 1988.

Interest on total debt was $2,359 million. This was $54 million less than in 1987, a result of favorable foreign-exchange rates.

Interest capitalized to Construction in progress reached $257 million, an increase of 34.0% or $65 million, primarily due to work on the Radisson-Nicolet-Des Cantons transmission line and on additional capacity at Manic 5 and La Grande 2 in 1988. The increase in interest capitalized to Construction in progress reduced the amount of interest charged to operations.

EXCHANGE LOSS DECREASES 8.2%

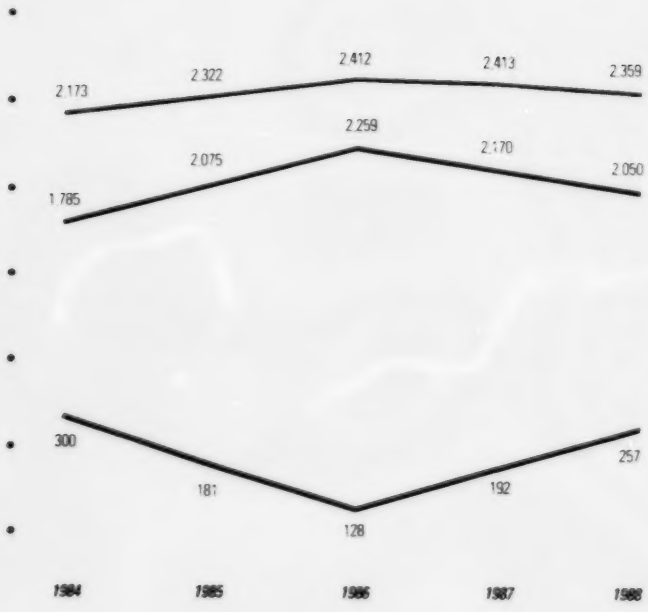
Exchange loss was $249 million, $23 million less than in 1987.

The strengthening of the Canadian dollar reduced the amortization of unrealized exchange loss on debt in European currencies and the Japanese yen, and therefore lowered the year's exchange loss, despite the effect of exchange-loss expense in 1988 associated with the early redemption of certain financial commitments.

The appreciation of the Canadian dollar in relation to the U.S. dollar had little effect on exchange loss however, as 80% of the U.S. dollar debt is hedged by continuous future revenue streams in U.S. dollars from export sales.

Main interest components

(Millions of dollars)



■ Gross interest charges
■ Interest charged to operations
■ Interest charged to Construction in progress

EVOLUTION OF TOTAL DEBT AND OF CANADIAN FINANCING

At 1988 year-end, total debt stood at $21.6 billion, down by $537 million over 1987 year-end. The strengthening of the Canadian dollar against debt in foreign currencies, particularly the U.S. dollar, reduced total debt by approximately $1.2 billion, while the nominal value of net borrowings was $646 million at year-end.

Hydro-Québec continued to pursue its goal of increasing the proportion of its financing in Canadian dollars and of using swaps to reduce the volatility of short-term debt servicing. At December 31, 1988, the proportion of total debt denominated in Canadian dollars, including swaps, was 63%, compared with 53% in 1987. If swaps are excluded, the Canadian dollar proportion of total debt was 45% at December 31, 1988, compared with 41% at December 31, 1987.

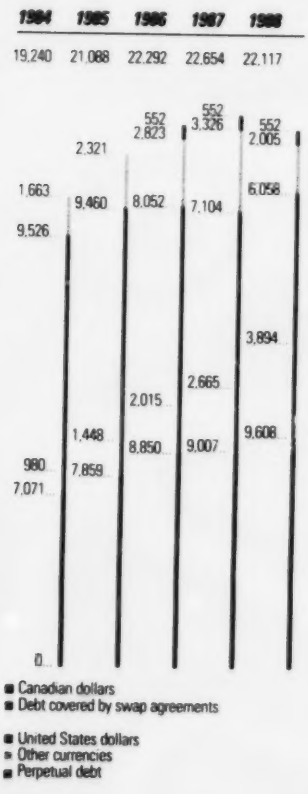
For 1988 the gross volume of financial transactions was $2,034 million. Net borrowings were $611 million, $310 million more than in 1987, while renegotiation of existing borrowings amounted to $174 million, down $396 million from 1987. These renegotiations will reduce interest expenses in the years to come.

The proportion of 1988 transactions in Canadian dollars was 71%, including swaps, and the average term of 1988 borrowings was 15.0 years. This increases the average life of the total debt and ensures a better spread of maturities, thus making it easier to refinance debt as it becomes due.

Financing activities in 1988 brought floating-rate debt to 13.1% of total debt and perpetual debt. This meets Hydro-Québec's goal for 1988 and reduces its vulnerability to changes in the economic climate.

Composition of total debt, and perpetual debt

(Millions of dollars)



Breakdown of financing

(Millions of dollars)

CAPITAL EXPENDITURE INCREASES 28.5%

Investment in fixed assets was up by 28.5%, reaching $2,033 million at year-end, compared with $1,581 million in 1987.

A large part of the year's investments, $1,265 million, went into generating and transmission facilities. Construction spending on the Radisson-Nicolet-Des Cantons transmission line and related substations and other structures totalled $462 million. As of 1990, this transmission line will deliver firm electricity to the New England Power Pool (NEPOOL), and from 1992 on will also be used to meet growing demand in Québec. Spending on construction for additional capacity of 1,100 megawatts at Manic 5 totalled $155 million. Hydro-Québec also invested $121 million in 1,900 megawatts of additional capacity at La Grande 2, the commissioning of which, initially planned for 1992-1993, has been brought forward one year.

Investments for distribution facilities reached $494 million.

FINANCIAL SITUATION CONTINUES TO IMPROVE

In 1988, Hydro-Québec set out to restore or maintain three of its major financial ratios: a capitalization ratio of 25% or more, an interest-coverage ratio greater than 1.00, and a self-financing ratio higher than 30%.

Capitalization reached 26.2%, compared with 24.9% in 1987. Under the Hydro-Québec Act, this entitled the Québec government as sole shareholder to declare dividends of $461 million for the 1988 financial year. However, the government decided to declare only $300 million, to allow the utility a larger margin of manoeuver for investment in forthcoming years.

The strengthening of the Canadian dollar made two significant contributions to the increase in capitalization: first, by raising net income, and second, by reducing outstanding debt, as debts in foreign currencies not covered by monetary agreements were revalued at lower exchange rates than those in effect in 1987.

Interest coverage, for its part, remained at approximately the same level in 1988 as in 1987. However, self-financing declined, from 41.0% to 34.0%.

Return on equity was up for the third consecutive year and reached 8.0%, compared with 7.0% in 1987.

FINANCIAL SITUATION OF RETIREMENT FUND

The net assets of the Hydro-Québec Retirement Fund rose from $2,425 million in 1987 to $2,689 million in 1988, an increase of $264 million. To further diversify the fund's assets, most of this increase went to the stock portfolio. The market value of the Retirement Fund portfolio grew by $281 million to $2,713 million.

The rate of return, calculated from the book value of the Retirement Fund portfolio, stood at 8.8% for 1988, compared with 9.7% for 1987. The method used for calculating this return does not take account of capital gains or losses until they are realized, and consequently does not reflect appreciation of the market value of the stock portfolio.

The fund paid out $80 million in pension benefits in 1988, 6.5% more than in the preceding year. There were 5,627 pensioners at year-end, compared with 5,419 at the end of 1987. An actuarial valuation conducted in 1988 for purposes of financing the Retirement Fund showed a net surplus of $159 million for the overall plan at December 31, 1987.

Financial ratios and declared dividends

	1984	1985	1986	1987	1988
Interest coverage	1.10	1.12	1.15	1.25	1.26
Capitalization (%)	25.3	24.1	24.0	24.9	26.2
Self-financing (%)	34.2	35.7	40.6	41.0	34.0
Return on equity (%)	4.7	3.2	4.4	7.0	8.0
Declared dividends *(Millions of dollars)*	156	–	–	–	300

Interest coverage

$$\frac{\text{Income before interest and exchange loss} + \text{Net investment income}}{\text{Gross interest charges}}$$

Capitalization

$$\frac{\text{Shareholder's equity}}{\text{Shareholder's equity} + \text{Long-term debt} + \text{Perpetual debt} + \text{Notes payable} + \text{Long-term debt payable within one year}}$$

Self-financing

$$\frac{\text{Total financial resources provided by operations} - \text{Declared dividends}}{\text{Investments} + \text{Redemption of long-term debt}}$$

Return on equity

$$\frac{\text{Net income}}{\text{Shareholder's equity (year's average)}}$$

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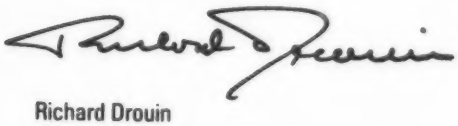
MANAGEMENT REPORT

Hydro-Québec's consolidated financial statements and all additional information contained in the Annual Report are the responsibility of management and were approved by the Board of Directors. The financial statements were prepared in accordance with generally accepted accounting principles. Financial data contained elsewhere in the Annual Report is consistent with the financial statements.

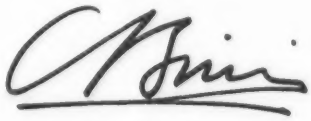
Management, in keeping with its responsibilities, maintains an internal control system, designed among other things to provide reasonable assurance that Hydro-Québec's assets are safeguarded and that the financial records form an appropriate basis for the preparation of reliable financial statements.

In the opinion of management, these financial statements incorporate, within reasonable limits of materiality, all important elements and data available at January 31, 1989.



Richard Drouin

Chairman of the Board and Chief Executive Officer



Claude Boivin

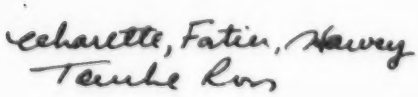
President and Chief Operating Officer

AUDITORS' REPORT

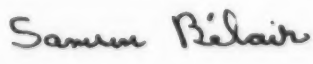
To the Gouvernement du Québec,

We have examined the consolidated balance sheet of Hydro-Québec as at December 31, 1988 and the consolidated statements of operations, retained earnings and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of Hydro-Québec as at December 31, 1988 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.



Charette, Fortier, Hawey
Touche Ross
Chartered Accountants



Samson Bélair

Chartered Accountants

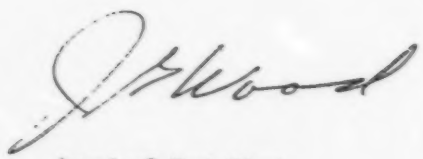
Montréal, Canada
January 31, 1989

CONSOLIDATED STATEMENT OF OPERATIONS

	(in millions of dollars) For the year ended December 31	
	1988	1987
Revenue		
Sales of electricity (Note 2)	**$5,223**	$5,040
Other operating income	**83**	55
	5,306	5,095
Expenditure		
Operations	**1,419**	1,246
Electricity purchased	**136**	110
Depreciation of fixed assets	**538**	500
Taxes (Note 3)	**295**	289
	2,388	2,145
Income before interest and exchange loss	**2,918**	2,950
Interest (Note 4)	**2,050**	2,170
Exchange loss	**249**	272
	2,299	2,442
Net income	**$ 619**	$ 508

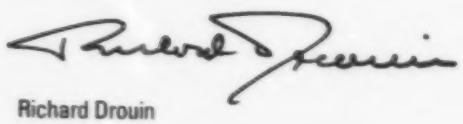
CONSOLIDATED BALANCE SHEET

ASSETS	(in millions of dollars) As at December 31 1988	1987
Fixed assets		
Property and plant (Note 5)		
In service	$29,990	$28,862
Less accumulated depreciation	4,402	3,937
	25,588	24,925
Construction in progress	3,402	2,565
	28,990	27,490
Current assets		
Cash and temporary investments	145	162
Accounts receivable	1,051	1,087
Materials, fuel and supplies	242	223
	1,438	1,472
Other assets		
Investments (Note 6)	127	124
Deferred expenses (Note 7)	1,207	2,573
	1,334	2,697
	$31,762	$31,659



Jeannine Guillevin Wood

Chairperson of the Audit Committee



Richard Drouin

Chairman of the Board
and Chief Executive Officer

Montréal, Canada
February 9, 1989

	(in millions of dollars) As at December 31	
LIABILITIES AND SHAREHOLDER'S EQUITY	1988	1987
Long-term debt (Note 8)	$20,576	$21,198
Current liabilities		
Accounts payable	723	594
Dividends payable	300	–
Notes payable	16	94
Accrued interest	756	786
Long-term debt payable within one year (Note 8)	989	904
	2,784	2,378
Perpetual debt (Note 9)	552	552
Shareholder's equity		
Share capital		
Authorized 50,000,000 shares, par value of $100 each		
Issued and fully paid 43,741,090 shares	4,374	4,374
Retained earnings	3,476	3,157
	7,850	7,531
	$31,762	$31,659

CONSOLIDATED STATEMENT OF RETAINED EARNINGS

	(in millions of dollars) For the year ended December 31	
	1988	1987
Balance at beginning of year	$3,157	$2,649
Net income	619	508
	3,776	3,157
Dividends (Note 10)	300	–
Balance at end of year	$3,476	$3,157

CONSOLIDATED STATEMENT OF CHANGES IN FINANCIAL POSITION

	(in millions of dollars) For the year ended December 31	
	1988	1987
Funds provided by operations		
Net income	$ 619	$ 508
Depreciation of fixed assets	538	500
Amortization of deferred expenses	358	383
Difference between pension expense and contributions	(77)	(73)
Net loss on redemption of long-term debt	3	5
	1,441	1,323
Decrease in working capital (Note 11)	355	64
Dividends	(300)	–
	1,496	1,387
Funds provided by external financing		
Issue of long-term debt	1,860	1,842
Redemption of long-term debt	(1,249)	(1,541)
	611	301
Funds available for investment	$2,107	$1,688
Investment		
Fixed assets	$2,033	$1,581
Grants under sales programs	62	88
Other	12	19
	$2,107	$1,688

December 31, 1988

Note 1
Significant accounting policies

a) Hydro-Québec mandate and rates

Under the provisions of its Act, Hydro-Québec has the mandate to supply power and to pursue endeavors in energy-related research and promotion, energy conversion and conservation, and any field connected with or related to power or energy. The rates and conditions under which power is supplied must be consistent with sound financial administration. The Hydro-Québec Act stipulates that the rates must be maintained at a level sufficient to defray at least all operating expenditures, interest on debt, and depreciation of fixed assets over a maximum period of 50 years. The rates are established by Hydro-Québec and are approved by the Gouvernement du Québec.

b) Consolidation

The consolidated financial statements include the financial statements of Hydro-Québec and its subsidiary companies.

c) Sales of electricity

Revenue from sales of electricity is recorded on the basis of cyclical billings. It is also accrued in respect of electricity delivered but as yet unbilled.

d) Property and plant

Property and plant include generation, transmission and distribution facilities and administration and service buildings, as well as construction, operating and research equipment. They are carried at cost, which includes material, direct labor and engineering and administration overhead costs applicable to the construction program. The cost also includes interest charged to Construction in progress as explained under (f) hereinafter. The costs of additions, improvements and replacements are capitalized and expenditures for maintenance and repairs are charged to operations. At the time of retirement or sale of an asset, the cost and accumulated depreciation, less the realizable value, are transferred to a separate account; the net amount is amortized over ten years according to the sinking fund method of depreciation, based on an interest rate of 3%.

The costs of generating facilities, up to an amount equal to the accumulated cost at date of transfer, are transferred to Property and plant in service in instalments equal to the number of generating units completed and in service as a proportion of the total number scheduled for the new facility, on the basis of the present value of the total estimated cost. The costs of transmission, distribution and other facilities are transferred to Property and plant in service when these facilities are completed and in commercial operation.

e) Depreciation

Hydro-Québec uses the sinking fund method of providing for depreciation of its property and plant (other than construction, operating and research equipment), based on an interest rate of 3% and the following expected service lives:

Hydraulic powerhouses, dams, reservoirs, transmission towers (steel) and conductors, and administration and service buildings	50 years
Hydraulic turbines and generators and distribution conductors	40 years
Nuclear power station and its turbine, generator and reactor	30 years
Distribution poles	25 years

Construction, operating and research equipment is depreciated over its expected service life according to the straight-line method.

f) Interest charged to Construction in progress

Interest is added to the cost of construction in progress at a rate equivalent to the weighted average of the effective interest rates on Hydro-Québec's debt securities issued to finance such construction and includes the exchange loss on the principal amount of this debt. This rate was 11.80% in 1988 and 12.84% in 1987.

Note 1

Significant accounting policies (cont'd)

g) Research and development

Preliminary engineering, investigation and survey costs incurred on projects before authorization for their construction is obtained are charged to operating expenditure. The cost of research and development related to alternative energy sources, or not related to a specific project, is also charged to operations.

h) Materials, fuel and supplies

Inventories of materials, fuel and supplies are valued on an average-cost basis.

i) Investments

All investments are shown at cost. The cost of temporary investments approximates market value.

j) Foreign currency translation

Revenue and expenditure resulting from transactions made in foreign currencies are translated into the Canadian dollar equivalent at exchange rates in effect at the transaction date. Monetary assets and liabilities are translated into Canadian dollars at exchange rates in effect at the balance sheet date, and non-monetary items are translated into Canadian dollars at exchange rates in effect at the transaction date. However, monetary items covered by monetary agreements against exchange risks are translated into Canadian dollars at the exchange rates established under the conditions of the relevant agreement. The exchange gains or losses resulting from these translations are included in the consolidated statement of operations; those pertaining to the capital of long-term debt are deferred and amortized on a straight-line basis over the remaining life of the debt, except for those hedged by future revenue streams in U.S. dollars, which are deferred until the date of repayment of such debt.

k) Grants under sales programs

In the framework of its plan to expand the Québec market, Hydro-Québec has implemented assistance programs for the marketing of electricity. The grants for these programs are deferred and amortized on a straight-line basis over the 5 years after the year in which they are made.

l) Debt-security discount and expenses

Debt-security discount and expenses are deferred and amortized on a straight-line basis over the life of the debt to which they apply.

m) Sinking fund

Hydro-Québec forms virtually its entire sinking fund through the purchase of its own debentures. It deducts these funds from long-term debt and carries them at par, which may not be indicative of cost or current market value. The resulting profit or loss is included with Interest (see Note 4). The unamortized discount is written off when these debt securities are cancelled.

n) Dividends

The dividends declared by the Gouvernement du Québec (see Note 10) are deducted from the retained earnings of the year for which they were declared.

o) Pension expense

The costs of the retirement plan are determined periodically by independent actuaries. Pension expense is charged annually to operations and comprises the total of the following:

- The cost of pension benefits provided in exchange for employees' services rendered during the year, as calculated using the projected benefit method pro rated on services, and
- Amortization over the employees' expected average remaining service life, according to the level annual contribution method, of (i) adjustments arising from changes in the plan or in assumptions, (ii) experience gains or losses, and (iii) the plan surplus determined upon adoption of the 1986 recommendations of the Canadian Institute of Chartered Accountants.

The cumulative difference between pension expense and contributions made to the Retirement Fund is reflected in Deferred expenses.

Note 2

Sales of electricity

Sales of electricity include $346 million ($446 million in 1987) from sales to the United States.

Note 3

Taxes

(in millions of dollars)	1988	1987
Capital tax	$142	$145
Tax on gross revenue as municipal real estate tax on certain immovables	129	120
Real estate taxes	24	24
	$295	$289

Note 4

Interest

(in millions of dollars)	1988	1987
Interest on debt securities	$2,338	$2,392
Amortization of debt-security discount and expenses	21	21
Net loss on redemption of long-term debt	3	5
	2,362	2,418
Less		
Interest charged to Construction in progress	257	192
Net investment income	55	56
	312	248
	$2,050	$2,170

Note 5
Property and plant

(in millions of dollars)	1988			1987		
	Property and plant in service	Accumulated depreciation	Construction in progress	Property and plant in service	Accumulated depreciation	Construction in progress
Generation						
Hydraulic	$13,581	$1,771	$1,730	$13,491	$1,588	$1,376
Nuclear	1,457	159	12	1,455	127	13
Other	380	151	11	359	137	20
	15,418	2,081	1,753	15,305	1,852	1,409
Transmission						
Substations	3,152	401	624	2,960	353	393
Lines	4,156	531	537	4,096	482	253
	7,308	932	1,161	7,056	835	651
Distribution						
Substations	1,100	178	68	983	164	134
Lines	3,876	560	267	3,496	505	245
	4,976	738	335	4,479	669	379
Other						
Administration and service buildings	943	134	61	686	60	61
Equipment	792	430	–	688	372	–
Sundry	553	87	92	648	149	65
	2,288	651	153	2,022	581	126
Total	$29,990	$4,402	$3,402	$28,862	$3,937	$2,565

Note 6
Investments

(in millions of dollars)	1988	1987
Churchill Falls (Labrador) Corporation Limited (CFLCo) (see Note 13)		
General Mortgage Bonds, 7½%, due 1989 through 2010 (par value $83 million in 1988 and $85 million in 1987)	$ 76	$ 77
Common shares	34	34
	110	111
Other	17	13
	$127	$124

Note 7
Deferred expenses

(in millions of dollars)	1988	1987
Unrealized exchange loss	$ 479	$1,890
Grants under sales programs	226	246
Debt-security discount and expenses	197	193
Pension expense	225	148
Other	80	96
	$1,207	$2,573

Note 8

Long-term debt

Hydro-Québec's long-term debt is guaranteed by the Province de Québec, except for an amount of $177 million ($189 million in 1987).

Debenture and other long-term debt maturities and sinking fund requirements, translated into Canadian dollars, are shown in the following table:

	1988		1987	
Years of maturity	(in millions of dollars)	Weighted average interest rate	(in millions of dollars)	Weighted average interest rate
1988	$ –		$ 904	
1989	989		1,118	
1990	1,068		1,414	
1991	1,517		1,664	
1992	1,801		1,751	
1993	863		–	
1 - 5 years	6,238	12.31%	6,851	11.04%
6 - 10 years	6,089	10.44%	6,308	9.88%
11 - 15 years	3,046	9.75%	1,973	8.97%
16 - 20 years	3,319	10.67%	4,165	10.58%
21 - 25 years	1,682	11.36%	1,608	11.15%
26 - 30 years	434	10.25%	382	12.40%
31 - 35 years	–	–	–	–
36 - 40 years	757	8.25%	815	8.44%
	21,565	10.92%	22,102	10.39%
Less Portion payable within one year	989		904	
	$20,576		$21,198	

Note 8

Long-term debt (cont'd)

Repayments to be made in Canadian dollars and in foreign currencies, with their Canadian dollar equivalent, are shown in the following table:

				1988	1987
			(in millions of units)	Total (in millions of dollars)	Total (in millions of dollars)
	1989 to 1993	*1994 to 2027*	*Total*	*1989 to 2027*	*1988 to 2027*
Canadian dollars	2,090	7,518	9,608	$ 9,608	$ 9,007
At rates established according to conditions of monetary agreement					
United States dollars	1,785	465	2,250	2,934	1,979
Deutsche marks	350	–	350	179	179
Swiss francs	200	150	350	195	195
Yen	–	45,450	45,450	412	312
Pounds sterling	–	75	75	174	–
				13,502	11,672
At rates in effect at balance sheet date					
United States dollars	628	4,454	5,082*	6,058	7,104
Deutsche marks	532	507	1,039	700	926
Swiss francs	200	603	803	639	1,425
Yen	14,400	5,600	20,000	191	344
Pounds sterling	–	150	150	324	368
ECUs	50	–	50	70	153
Guilders	75	60	135	81	110
				8,063	10,430
				$21,565	$22,102

*A proportion of 80% (98% in 1987) is hedged by future revenue streams in U.S. dollars.

Hydro-Québec has two undrawn revolving standby credits for U.S. $400 million and U.S. $750 million which expire in 1993 and 1994, respectively. Any borrowing under this line of credit will bear interest at a rate based on the London Interbank Offered Rate (LIBOR).

Note 9

Perpetual debt

Perpetual notes in the amount of U.S. $400 million bear interest at a rate based on the London Interbank Offered Rate (LIBOR) established twice yearly. They are guaranteed by the Province de Québec and are redeemable, at Hydro-Québec's option, beginning in 1991. These notes are shown in Canadian dollars at the exchange rate in effect at date of issue ($477 million at exchange rate in effect at balance sheet date).

Note 10

Restrictions on dividends

Under the Hydro-Québec Act, the dividends to be paid by Hydro-Québec are declared once a year by the Gouvernement du Québec, which also determines the terms and conditions of payment. For a given financial year, they cannot exceed the distributable surplus, which is established as follows: 75% of income before interest and exchange loss and the year's net investment income, less interest on debt securities and amortization of debt-security discount and expenses. This calculation is made on the basis of the consolidated financial statements.

However, in respect of a given financial year no dividend may be declared in an amount that would have the effect of reducing the rate of capitalization to less than 25% at the end of the year concerned. This rate corresponds to the ratio between shareholder's equity (less dividends declared for the year) and the total of long-term debt, notes payable, perpetual debt and shareholder's equity (less dividends declared for the year).

The government declares the dividends for a given year within 30 days after the transmission by Hydro-Québec to the government of the financial data relative to the distributable surplus. On expiry of the time prescribed, any distributable surplus or part thereof which has not been subject to a dividend declaration may no longer be distributed to the shareholder as a dividend.

In accordance with the above, dividends of $461 million could have been declared for the 1988 financial year. However, the Gouvernement du Québec declared dividends of $300 million.

Note 11

Decrease in working capital

(in millions of dollars)	1988	1987
Decrease (increase) in current assets		
Cash and temporary investments	$ 17	$ (88)
Accounts receivable	36	(40)
Materials, fuel and supplies	(19)	(9)
	34	(137)
Increase (decrease) in current liabilities		
Accounts payable	129	119
Dividends payable	300	–
Notes payable	(78)	85
Accrued interest	(30)	(3)
	321	201
	$355	$ 64

Note 12

Retirement Plan

The Hydro-Québec retirement plan is a contributory, defined benefit pension plan based on final pay, under which benefits payable are guaranteed by Hydro-Québec. At December 31, 1988, 18,964 employees were contributing to the plan. An actuarial valuation was made in 1988 in order to determine the present value of accrued benefits based on employees' expected basic salary until retirement. The retirement fund assets are valued at market-related values.

At December 31, 1988, the date of the most recent valuation, the retirement plan showed a surplus as follows:

	(in millions of dollars)
Retirement fund assets	$2,865
Present value of accrued benefits	(2,300)
Excess special contributions made by Hydro-Québec	(34)
Surplus	$ 531

For the year ended December 31, 1988, pension expense amounted to $14 million ($12 million in 1987).

Note 13

Commitments and projected capital expenditures

Churchill Falls

On May 12, 1969, Hydro-Québec signed a contract with Churchill Falls (Labrador) Corporation Limited (CFLCo) whereby Hydro-Québec undertook to purchase virtually all the power generated at the Churchill Falls generating station, of a rated capacity of 5,225,000 kilowatts, for a period of 40 years from September 1, 1976, except for an amount not to exceed 300,000 kilowatts of such power which may be recaptured by CFLCo. This contract will be automatically renewed for a further period of 25 years upon already agreed terms.

By this contract, Hydro-Québec undertook to make payment for energy whether or not taken, subject to certain limitations and compensations, and to pay CFLCo an amount equal to a portion of the interest charges on the debt incurred by CFLCo to finance the construction of the plant as well as an amount equal to a portion of the losses on foreign exchange incurred to service the debt issued in U.S. dollars. Hydro-Québec can also be required to make additional advances, against the issue of units of Subordinate Debentures and shares of Common Stock, to service the debt of CFLCo and to cover its expenses if funds are not otherwise available.

Projected capital expenditures

Hydro-Québec plans call for capital expenditures in the amount of $2,486 million for 1989.

SUMMARY OF CONSOLIDATED OPERATIONS
1984-1988

	(in millions of dollars)				
	1988	1987	1986	1985	1984
Revenue					
Sales of electricity	$5,223	$5,040	$4,673	$4,423	$4,101
Other operating income	83	55	61	69	72
	5,306	5,095	4,734	4,492	4,173
Expenditure					
Operations	1,419	1,246	1,129	1,163	1,106
Electricity purchased	136	110	118	122	158
Depreciation of fixed assets	538	500	464	419	376
Taxes	295	289	272	246	224
	2,388	2,145	1,983	1,950	1,864
Income before interest and exchange loss	2,918	2,950	2,751	2,542	2,309
Interest					
Interest on debt securities	2,338	2,392	2,388	2,294	2,151
Amortization of debt-security discount and expenses	21	21	24	23	22
Net loss (net profit) on redemption of long-term debt	3	5	5	(10)	(18)
Interest charged to Construction in progress	(257)	(192)	(128)	(181)	(300)
Net investment income	(55)	(56)	(30)	(49)	(70)
	2,050	2,170	2,259	2,077	1,785
Exchange loss	249	272	189	256	223
	2,299	2,442	2,448	2,333	2,008
Net income	$ 619	$ 508	$ 303	$ 209	$ 301

CONSOLIDATED SALES AND REVENUE
1984-1988

	1988	1987	1986	1985	1984	Average annual increase (in %) 1988/1983
Electricity sales						
(in millions of kWh)						
Firm in Québec:						
Residential and farm	43,697	40,412	40,548	38,427	36,041	6.1
General	21,034	18,686	17,221	20,811	19,794	1.3
Institutional	5,546	5,255	5,014	–	–	–
Industrial	44,821	41,698	36,512	34,351	31,383	8.9
Other	4,689	4,362	4,241	4,052	3,804	5.5
	119,787	110,413	103,536	97,641	91,022	7.1
Surplus in Québec:						
General	1,118	1,298	1,395	1,361	928	66.3
Industrial	7,547	11,189	11,082	9,505	6,955	26.4
Neighboring systems	58	1,253	1,176	1,239	2,028	(36.6)
	8,723	13,740	13,653	12,105	9,911	23.9
Deliveries outside Québec:						
Firm electricity	9,164	8,313	6,980	6,898	6,299	6.5
Surplus electricity	7,720	20,456	19,954	17,295	16,583	(9.7)
	16,884	28,769	26,934	24,193	22,882	(2.9)
Total sales	**145,394**	152,922	144,123	133,939	123,815	6.2
Revenue from electricity sales						
(in millions of dollars)						
Firm in Québec:						
Residential and farm	$1,965	$1,768	$1,683	$1,542	$1,422	9.2
General	1,040	904	815	938	880	4.0
Institutional	242	223	211	–	–	–
Industrial	1,205	1,106	978	904	840	9.6
Other	198	182	170	157	148	7.6
	4,650	4,183	3,857	3,541	3,290	9.0
Surplus in Québec:						
General	15	15	20	24	16	71.9
Industrial	86	113	135	167	119	19.0
Neighboring systems	1	16	12	18	30	(34.0)
	102	144	167	209	165	17.8
Deliveries outside Québec:						
Firm electricity	276	256	242	218	177	10.0
Surplus electricity	195	457	407	455	469	(11.4)
	471	713	649	673	646	(2.3)
Total revenue	**$5,223**	$5,040	$4,673	$4,423	$4,101	7.8
Number of customer accounts						
(year-end)						
Residential and farm	2,753,717	2,676,810	2,599,403	2,527,643	2,445,755	3.0
General	233,967	226,498	219,284	235,291	230,078	(1.7)
Institutional	24,053	23,868	23,275	–	–	–
Industrial	13,368	13,088	13,045	13,077	12,963	0.6
Other	7,160	7,168	7,415	7,579	7,805	1.1
Total	**3,032,265**	2,947,432	2,862,422	2,783,590	2,696,601	2.8

ENERGY REQUIREMENTS OF SYSTEM
1984-1988

	(in millions of kilowatthours)					Average annual increase (in %)
	1988	1987	1986	1985	1984	1988/1983
Total requirements						
Generated (gross)	129,043	137,730	128,078	115,538	100,343	7.9
Received:						
Purchased	31,754	30,422	30,892	32,111	36,333	0.1
Received as per agreement	2,948	2,118	1,940	2,368	2,210	3.5
	34,702	32,540	32,832	34,479	38,543	0.3
Total requirements	**163,745**	170,270	160,910	150,017	138,886	6.0
Québec requirements						
Firm electricity	119,787	110,413	103,536	97,641	91,022	7.1
Deliveries as per agreement	4,145	3,085	3,118	3,470	3,230	3.4
Total – Priority consumption	**123,932**	113,498	106,654	101,111	94,252	6.9
Generating-station service	592	500	514	685	652	1.7
Losses and other	12,098	11,122	10,655	11,928	11,188	2.4
Total priority requirements	**136,622**	125,120	117,823	113,724	106,092	6.5
Surplus electricity	8,723	13,740	13,653	12,105	9,911	23.9
Generating-station service	42*	59*	63*	–	–	–
Losses and other	457*	798*	773*	–	–	–
Total Québec requirements	**145,844**	139,717	132,312	125,829	116,003	7.2
Deliveries outside Québec						
Firm electricity	9,164	8,313	6,980	6,898	6,299	6.5
Surplus electricity	7,720	20,456	19,954	17,295	16,583	(9.7)
Deliveries as per agreement	41	(12)	29	(5)	1	59.3
Generating-station service	80*	124*	127*	–	–	–
Losses and other	896*	1,672*	1,508*	–	–	–
Total deliveries outside Québec	**17,901**	30,553	28,598	24,188	22,883	1.7
Total requirements	**163,745**	170,270	160,910	150,017	138,886	6.0

*As of January 1986, losses and generating-station service are assigned to various categories.

POWER REQUIREMENTS OF SYSTEM
FOR THE WINTER BEGINNING IN DECEMBER*

	(in thousands of kilowatts)					Average annual increase (in %)
	1988	1987	1986	1985	1984	1988/1983
Total requirements	**27,250**	28,246	26,004	25,745	25,487	4.4
Priority requirements	**26,466**	26,005	23,219	22,895	22,406	5.7

*The power requirements of 1988 correspond to data available at January 31, 1989. The power requirements of 1987 and 1985 include respectively 1,068 MW and 881 MW which were withheld through application of interruptible power clauses in certain contracts.

AUDITORS' REPORT

To the Administrators,

We have examined the statement of net assets of the Hydro-Québec Retirement Fund as at December 31, 1988 and the statement of changes in net assets for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the net assets of the Hydro-Québec Retirement Fund as at December 31, 1988, and the changes in its net assets for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Charette, Fortier, Hawey
Touche Ross

Charette, Fortier, Hawey
Touche Ross
Chartered Accountants

Samson Bélair

Samson Bélair

Chartered Accountants

Montréal, Canada
January 31, 1989

STATEMENT OF NET ASSETS

	(in millions of dollars) As at December 31	
	1988	1987
Investments (Note 2)		
Bonds or debentures (Note 3)	$1,387	$1,447
Common shares	649	443
Deep-discount investments guaranteed by the Government of Canada or by the provinces	231	208
Mortgage loans	51	17
Cash and short-term investments	354	310
	2,672	2,425
Dividends and interest receivable	45	42
Accounts receivable	6	5
	2,723	2,472
Less		
Excess special contributions made by Hydro-Québec (Note 4)	34	47
	$2,689	$2,425

On behalf of Hydro-Québec,

Jeannine Guillevin Wood

Chairperson of the Audit Committee

Richard Drouin

Chairman of the Board and Chief Executive Officer

Montréal, Canada
February 9, 1989

STATEMENT OF CHANGES IN NET ASSETS

	(in millions of dollars) For the year ended December 31	
	1988	1987
Balance at beginning of year	**$2,425**	$2,165
Increase		
Revenue from investments	**219**	219
Current contributions		
Employees	**38**	35
Hydro-Québec	**74**	70
	112	105
Hydro-Québec's contribution (Note 4)	**16**	16
	347	340
	2,772	2,505
Decrease		
Excess special contributions made by Hydro-Québec (Note 4)	**3**	5
Benefits paid	**80**	75
	83	80
Balance at end of year	**$2,689**	$2,425

NOTES TO FINANCIAL STATEMENTS

December 31, 1988

Note 1
Significant accounting policies

These statements show only the net assets of the Hydro-Québec Retirement Fund, and do not purport to show the adequacy of the Fund to meet the obligations of the Hydro-Québec Retirement Plan, which are guaranteed by Hydro-Québec.

a) Investments

Bonds and debentures

Bonds and debentures are shown at amortized cost. Gains or losses on sales of bonds and debentures are calculated on an average amortized cost basis.

Common shares

Common shares are shown at cost. Revenue is recorded at the ex-dividend date. Gains or losses on sales of common shares are calculated on an average cost basis.

Deep-discount investments

Deep-discount investments are shown at amortized cost.

Mortgage loans

Mortgage loans are shown at their principal balance outstanding.

Short-term investments

Short-term investments are shown at cost.

b) Recording of transactions

Revenue from investments, contributions and benefits are accounted for on an accrual basis.

c) Foreign currency translation

Revenue resulting from transactions made in foreign currencies is translated into the Canadian dollar equivalent at exchange rates in effect at the transaction date. Cash, short-term investments, dividends and interest receivable are translated into Canadian dollars at exchange rates in effect at the balance sheet date.

Common shares are translated into Canadian dollars at exchange rates in effect at the transaction date. The exchange gains or losses resulting from these translations are reflected in revenue from investments.

Note 2

Market value of investments

(in millions of dollars)	1988	1987
Bonds or debentures (par value of $1,390 million in 1988 and $1,446 million in 1987)	$1,392	$1,441
Common shares – Canadian	597	419
– Foreign	75	27
Deep-discount investments	244	218
Mortgage loans	51	17
Cash and short-term investments	354	310
	$2,713	$2,432

Note 3

Bonds or debentures

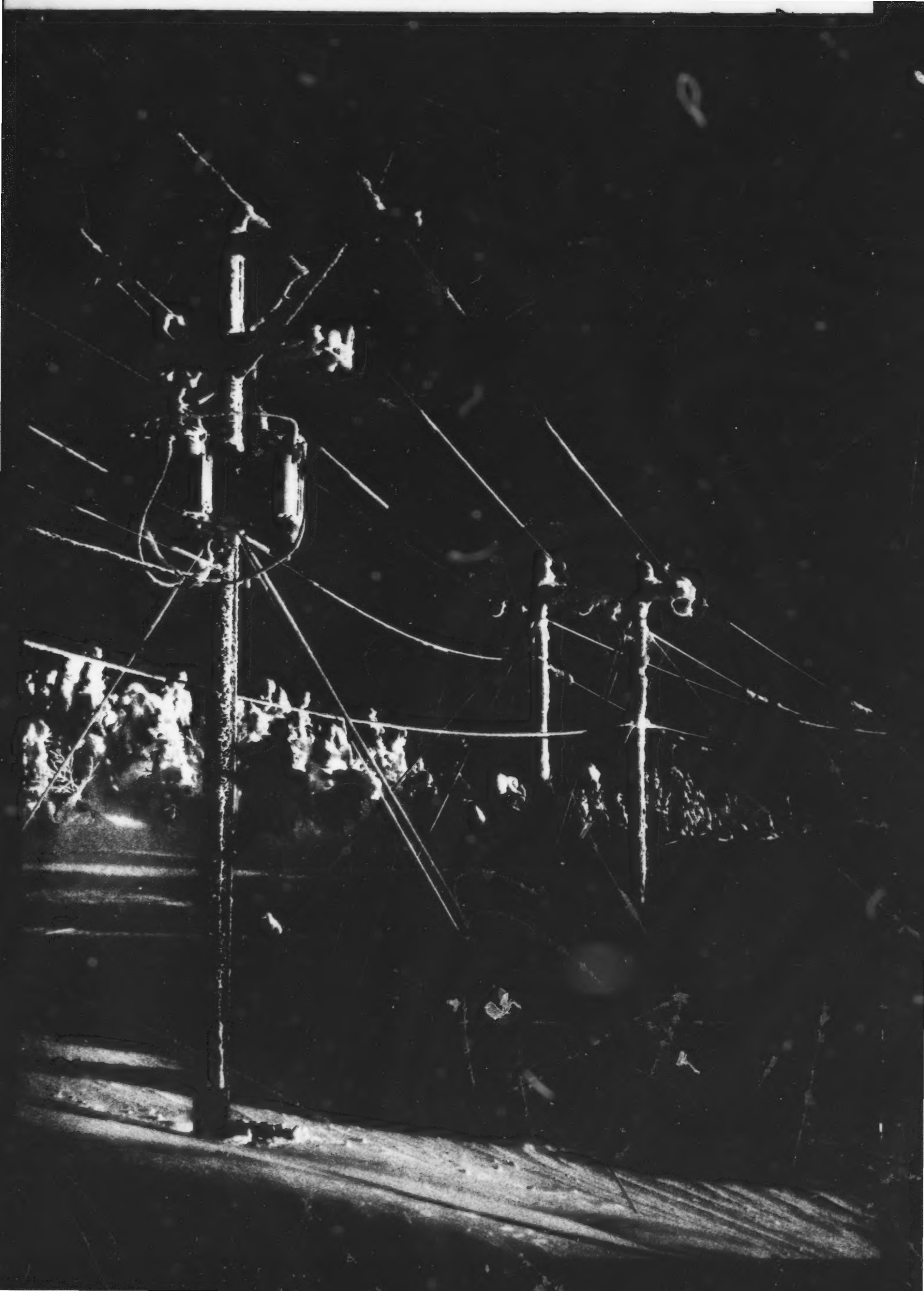
(in millions of dollars)	1988	1987
issued or guaranteed by the Government of Canada	$ 465	$ 219
issued or guaranteed by the Province de Québec	192	244
of Hydro-Québec guaranteed by the Province de Québec	283	481
issued or guaranteed by other provinces	86	48
of municipalities, school commissions, Cegeps, hospitals and universities	212	221
of corporations	149	234
	$1,387	$1,447

Note 4

Actuarial valuation

An independent actuarial valuation made in 1988 for purposes of financing the Retirement Fund shows a net surplus for the overall plan at December 31, 1987. The fund of the basic plan of the Retirement Fund shows a surplus of $271 million while the fund of the supplementary plans shows a deficit of $112 million. In conformity with the bylaws governing Hydro-Québec's retirement plan, Hydro-Québec must amortize this deficit over a maximum period of 15 years.

Previous actuarial valuations revealed excess special contributions paid by Hydro-Québec in the financial years 1982 through 1984. These contributions and related interest are accounted for by decreasing the assets of the Retirement Fund in the item Excess special contributions made by Hydro-Québec.



TRIBUTE TO GUY COULOMBE

Guy Coulombe left Hydro-Québec in April 1988. Although he was then both Chairman of the Board and President and Chief Executive Officer, it was mainly during his six years in the latter capacity that he made his mark on the history of Hydro-Québec.

When he joined the utility in 1982, Mr. Coulombe faced a sizable challenge. Two decades of sustained growth had drawn to a close, electricity demand in Québec was falling, and the utility's financial situation was depressed by rising debt load and operating costs. The way had to be found to confront a new economic and energy situation.

Guy Coulombe gave a new vitality to Hydro-Québec's marketing thrust, aimed principally at providing new and innovative products that meet customers' needs and expectations. By tightening control over the utility's human, financial and material resources, he also reinforced its financial situation.

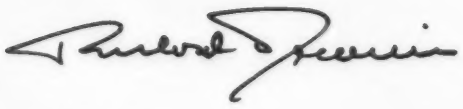
The results speak for themselves: average growth in total electricity sales of 8.1% per year between 1982 and 1987; a marked slowdown in the rise of operating expenses, and a significant improvement in the utility's financial situation.

In addition, Guy Coulombe furthered the development of strategic planning tools that give the Board and the shareholder greater flexibility in guiding the utility's development objectives and policies.

To Hydro-Québec's staff, the name Guy Coulombe suggests a management philosophy based on five basic values: quality of service – optimum profitability – staff development – active contribution to the social and economic development of the community – quality technological innovation and development. And these values continue to guide and inspire the utility's actions and decisions.

Outside Hydro-Québec, Guy Coulombe increased contacts with other electric utilities, the financial and technology sectors, industry and the universities, to enlist their support in the utility's future development.

The Board of Directors, senior management and all the utility's employees offer Guy Coulombe their sincere thanks for his hard work and professionalism in the service of Hydro-Québec.



Richard Drouin

Chairman of the Board and
Chief Executive Officer

BOARD OF DIRECTORS
(At December 31, 1988)

Chairman of the Board and Chief Executive Officer
Richard Drouin*

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Marcel Aubut
Partner in the law firm of Aubut, Chabot, Québec City

Michel Bélanger
Chairman of the Board and Chief Executive Officer of the National Bank of Canada

Claude Boivin
President and Chief Operating Officer of Hydro-Québec

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Partner in the firm of D'Argensio & Associés, auditors

Robert Demers
Vice Chairman of the Board of McNeil Mantha Inc.

Jean-Louis Dulac
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Jean-André Élie
Financial Adviser with Burns Fry Ltd.

François Geoffrion*
Interim Deputy Minister, Ministry of Energy and Resources, Gouvernement du Québec (ex-officio non-voting member)

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Gérald Tremblay*
President and Chief Executive Officer of la Société de développement industriel du Québec

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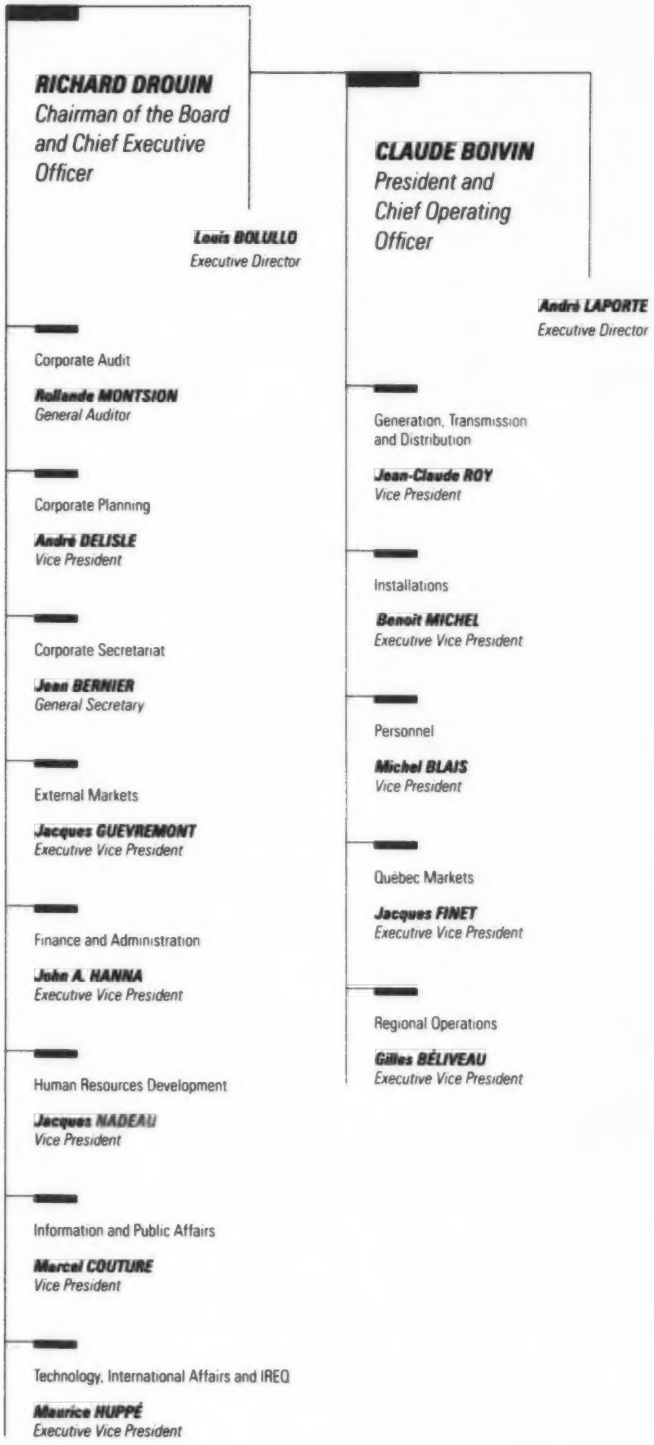
Richard Drouin, Chairman*
Marcel Aubut
Claude Boivin*
Jean-André Élie*
Claire Léger
Michel Plessis-Bélair

*Appointed in 1988

SENIOR OFFICERS



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General Auditor

General Auditing I
Pierre LAURIN
Director

General Auditing II
Diane CHARRON
Director

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Economic and Energy Studies
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Director

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Corporate Vice President

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Director

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Director

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Remuneration, Staffing and Development
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Roger BOISVERT
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Executive Vice President

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Philippe BIRON
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Daniel DUBEAU
Vice President

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Yves FILION
Vice President

System Planning
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Vice President

Transmission Facilities
Claude de GRANDMONT
Vice President

PERSONNEL

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Jacques FINET
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Customer Services
Pierre FISET
Vice President

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Director

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Louis-F. MONNIER
Director

Research (IREQ)
Alain BROSSEAU
Vice President

Research, Test Laboratories and System Simulation (IREQ)
Louis MASSON
Vice President

Technological Innovation
Toby GILSIG
Vice President

Technological Planning
Denise THERRIEN
Director

SUBSIDIARIES AND AFFILIATES

Hydro-Québec has six wholly-owned subsidiaries: Hydro-Québec International, Nouveler Inc., *Société 2312-0843 Québec Inc.*, *Société d'énergie de la Baie James*, Cedars Rapids Transmission Company Limited, and Somarex Inc.

It has a 34.2% interest in Churchill Falls (Labrador) Corporation Limited, which operates the Churchill Falls power plant. It also has a 50% interest in *HydrogenAL Inc.* and *HydrogenAL II Inc.*, which are general partners in the limited partnerships *société en commandite HydrogenAL* and *société en commandite HydrogenAL II* that produce hydrogen, and a 50% interest in *ArgonAL Inc.*, which is a general partner in the limited partnership *société en commandite ArgonAL* that mainly produces argon.

Hydro-Québec International
Chairman of the Board
Maurice Huppé
President and Chief Executive Officer
Claude Descôteaux

Hydro-Québec International provides management, operating and training services in the field of electricity abroad.

Nouveler Inc.
Chairman of the Board
Maurice Huppé
Chief Executive Officer
Claude Bolduc

Nouveler Inc. markets technological products developed by Hydro-Québec.

Société 2312-0843 Québec Inc.
Chairman of the Board
Jean Bernier

Société 2312-0843 Québec Inc. is a special partner in the limited partnership *société en commandite HydrogenAL II* and, on January 1, 1990, will become a special partner in the limited partnerships *société en commandite HydrogenAL* and *société en commandite ArgonAL* whose other special partner is Canadian Liquid Air Ltd.

Société d'énergie de la Baie James
Chairman of the Board
Benoît Michel
President and Chief Executive Officer
Paul F. Tremblay

Société d'énergie de la Baie James manages major construction projects for Hydro-Québec's power system.

Cedars Rapids Transmission Company Limited
Chairman of the Board
Pierre Bolduc
Chief Executive Officer
Jean Tremblay

Cedars Rapids Transmission Company Limited owns and operates a power transmission line between Les Cèdres generating station and the Canada-U.S. border.

Somarex Inc.
Chairman of the Board
Jacques Guevremont
President and Chief Executive Officer
Claude Dubé

Somarex Inc. was created to form, with Central Maine Power Company, a partnership responsible for designing, building, financing and operating a transmission line and substation in Maine.

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